Exhibit 13

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION**

WAPP TECH LIMITED PARTNERSHIP and WAPP TECH CORP., Plaintiffs, v. JPMorgan Chase Bank N.A., Defendant.	Civil Action No. 4:23-cv-01137-ALM JURY TRIAL DEMANDED

**DEFENDANT JPMORGAN CHASE BANK, N.A.'S
INVALIDITY CONTENTIONS PURSUANT TO P.R. 3-3 AND 3-4**

Pursuant to P.R. 3-3 and 3-4 and the Scheduling Order (Dkt. 26 and 35), Defendant JPMorgan Chase Bank, N.A. ("Defendant" or "JPMC") hereby serves these invalidity contentions and accompanying exhibits and production. These invalidity contentions are based on JPMC's current knowledge and understanding of asserted U.S. Patent Nos. 8,924,192 ("the '192 Patent"), 9,298,864 ("the '864 Patent"), 9,971,678 ("the '678 Patent"), 10,353,811 ("the '811 Patent"), and 10,691,579 ("the '579 Patent") (collectively "Asserted Patents"), along with JPMC's current knowledge and understanding of Plaintiffs Wapp Tech Limited Partnership and Wapp Tech Corp.'s (collectively "Plaintiffs," "Wapp Tech," or "Wapp") Disclosure of Asserted Claims and Preliminary Infringement Contentions Pursuant to P.R. 3-1 ("Infringement Contentions") dated May 17, 2024.

I.   PRELIMINARY STATEMENT

These invalidity contentions are preliminary in nature and do not address claim construction or non-infringement. JPMC reserves all rights with respect to such issues, including its position that the Asserted Claims should be construed in a particular manner and/or are not

infringed. These invalidity contentions are based on JPMC's current knowledge, understanding, and belief of the Asserted Patent and prior art, of Plaintiffs' infringement theories (as disclosed in the Infringement Contentions), and of the facts and other information available as of the date of these invalidity contentions. JPMC's investigation, discovery, and analysis of information related to this action is ongoing. Additional discovery and/or orders of the Court may require JPMC to amend or supplement these invalidity contentions, and JPMC expressly reserves the right to do so as the case proceeds. These contentions represent JPMC's good-faith effort to provide a comprehensive identification of prior art relevant to this case, but JPMC reserves the right to modify or supplement its prior art list and invalidity contentions at a later time with, or based upon, pertinent information that may be subsequently discovered.

A.   No Waiver

Nothing in these invalidity contentions is intended, nor should be construed, as a waiver of any claim construction argument, non-infringement position, or argument under 35 U.S.C. § 112. JPMC's statements herein (including the accompanying claim charts) reflect JPMC's present understanding of the purported scope of the claims as alleged by Plaintiffs in their Infringement Contentions. For the avoidance of doubt, these contentions are not intended to present or argue in favor of any construction of the Asserted Claims, and JPMC expressly reserves the right to present constructions that differ from any construction that may be alleged to underlie these contentions. The Court established separate deadlines for the parties' proposed claim constructions, and JPMC will disclose its proposed constructions accordingly. These invalidity contentions do not constitute an acquiescence to Plaintiffs' interpretation of any claims to the extent they depart from the plain meaning of the Asserted Claims and from the proper scope of the claims as may be subsequently construed by the Court. JPMCs disagrees with Plaintiffs' positions as to the purported scope of

the Asserted Claims to the extent they seek to expand the scope of the Asserted Claims beyond their proper construction.

The Asserted Claims have not yet been construed by the Court in this case and, thus, JPMC has not yet had the opportunity to compare the Asserted Claims of the Asserted Patent (as construed by the Court) with the prior art. JPMC reserves the right to amend, supplement, or materially modify its invalidity contentions after the claims have been construed by the Court in this case. JPMC also reserves the right to amend, supplement, or materially modify their invalidity contentions in response to any claim construction positions that Plaintiffs may take. JPMC also reserves the right to assert that a claim is indefinite, not enabled, or fails to meet the written description requirement of 35 U.S.C. § 112 based on any claim construction position Plaintiffs may take in this case or based on any claim construction the Court may adopt in this case.

B.   No Admission

Nothing disclosed herein is an admission or acknowledgement that any instrumentality accused of infringement by Plaintiffs in their Infringement Contentions ("Accused Instrumentalities"), or any of JPMC's other products, systems, tools, acts, or services, infringes any of the Asserted Claims.

JPMC further notes that Plaintiffs appear to rely on overly broad constructions of the Asserted Claims. At the same time, Plaintiffs' Infringement Contentions are, in many instances, too general and vague to discern Plaintiffs' infringement theories and how exactly Plaintiffs contend each Accused Instrumentality meets or practices each element of the Asserted Claims. As a result, JPMC has been prejudiced in its ability to prepare these invalidity contentions. In addition, Plaintiffs' Infringement Contentions, in many instances, fail to put JPMC on notice of Plaintiffs' interpretation of the Asserted Claims, further prejudicing JPMC's ability to identify

relevant prior art. In addition, Plaintiffs have only vaguely represented that the Asserted Claims are infringed under the doctrine of equivalents. Any attempt by Plaintiffs to present an untimely doctrine of equivalents argument would be severely prejudicial to JPMC. To the extent that Plaintiffs are later permitted by the Court to amend their contentions to cure the deficiencies of their current contentions or to pursue any currently undisclosed doctrine of equivalents theories, JPMC expressly reserves the right to supplement or amend these invalidity contentions to account for such amendments.

To the extent that any of the prior art references disclose the same functionality or feature of any of the Accused Instrumentalities, JPMC reserves the right to argue that said feature or functionality does not practice any element of any of the Asserted Claims, and to argue, in the alternative, that if said feature or functionality is found to practice any element of any of the Asserted Claims, then the prior art reference demonstrates that the element is not novel, is obvious, and/or is otherwise not patentable.

Attached hereto are representative claim charts that demonstrate how the Asserted Claims of the Asserted Patents are invalid in view of certain prior art. The references cited in the attached claim charts may disclose the limitations of the Asserted Claims expressly and/or inherently. The suggested obviousness combinations may be presented in conjunction with or in the alternative to JPMC's contentions regarding anticipation. These obviousness combinations should not be construed to suggest that any reference included in any combination is not anticipatory in its own right.

C.   Reservation of Rights

Prior art not included in this disclosure may become relevant. For example, JPMC is currently unaware of the extent, if any, to which Plaintiffs will contend that limitations of the

Asserted Claims are not disclosed in the prior art identified by JPMC. JPMC reserves the right to

identify other references that would have made the addition of the allegedly missing limitation

obvious or show that the allegedly missing limitation would have been known or readily apparent

to one of ordinary skill in the art at the time of the invention in light of the disclosure of the prior

art at issue.

Further, JPMC's investigation is ongoing, and JPMC expressly reserves the right to amend

its contentions, accompanying charts, disclosures, and document production to account for

evidence uncovered as its investigation continues, particularly third party discovery recently

produced and pending the receipt of other third party discovery for which JPMC is awaiting. In

all cases, JPMC has diligently sought such third party discovery. Such amendments include

identifying and relying on additional references that may result from JPMC's further search and

analysis and third party responses to JPMC's subpoenas. JPMC reserves the right to supplement

its contentions in light of any additional prior art of which Plaintiffs are aware and did not disclose

to JPMC in discovery, or that might be subsequently disclosed by Plaintiffs in response to JPMC's

discovery requests. JPMC anticipates issuing additional subpoenas to third parties believed to

have knowledge, documentation and/or corroborating evidence concerning some of the prior art

listed herein and/or additional prior art. These third parties include, but are not limited to, the

authors, employers of authors, inventors, assignees, or former or current employees of assignees,

of the references and systems identified in these invalidity contentions. JPMC reserves the right

to supplement these contentions in light of any newly discovered information produced by these

or other companies from which JPMC may seek discovery.

These contentions are provided without prejudice to JPMC's right to introduce at trial

expert opinions relating to currently known facts and subsequently-discovered facts, and

subsequently-discovered evidence of currently known facts, and to produce and introduce at trial all evidence, whenever discovered, relating to the proof of currently-known and subsequently-discovered facts.

JPMC provides these invalidity contentions only for the claims asserted by Plaintiffs and reserves the right to seek invalidation of all claims in the Asserted Patents.

D.   Plaintiffs' Infringement Contentions

Plaintiffs assert the following claims of the Asserted Patents in their Infringement Contentions:

U.S. Patent No.	Asserted Claims
8,924,192	Claims 1-7, 9, 12, 13, 60-62, and 65
9,298,864	Claims 1, 8, 13, 14, and 17
9,971,678	Claims 1-7, 9, 12, 13, 21, and 22
10,353,811	Claims 1, 2, 4, 5, 8, 9, 22, 24, and 26
10,691,579	Claims 15-20, 25-29, 33, and 34

Should Plaintiffs seek leave of the court to assert additional claims and/or modify its infringement contentions, JPMC reserves the right to oppose such addition or modification and to modify and/or supplement its invalidity contentions relating to any such additional claims and/or modifications.

Plaintiffs have not provided evidence that the Asserted Claims of the '864 and '579 patents are entitled to a priority date earlier than February 5, 2010, the filing date of U.S. Patent Application No. 12/705,913, which ultimately issued as U.S. Patent No. 8,589,140. JPMC maintains that U.S. Patent No. 8,589,140 is not entitled to a priority date earlier than February 5, 2010. Plaintiffs also have not provided evidence that the Asserted Claims of the '192, '678, and

'811 patents are entitled to a priority date earlier than April 13, 2010, the filing date of U.S. Patent Application No. 12/759,543, which ultimately issued as U.S. Patent No. 8,332,203.   JPMC maintains that the '192, '678, and '811 patents are not entitled to a priority date earlier than April 13, 2010.   JPMC's use of any priority date provided by Plaintiffs should not be construed as an admission to the accuracy of those dates or an indication that the quality of Plaintiffs' evidence is sufficient to support or establish such dates.

Plaintiffs' Infringement Contentions against JPMC reflect interpretations of certain claim limitations for which JPMC disagrees.   These invalidity contentions should not be used as basis for inferring whether any particular claim phrase or term should be construed as having a bearing on the scope of any Asserted Claim by, for example, acting as a limitation or creating an exclusion. JPMC makes these disclosures based on its current knowledge.   JPMC's discovery is continuing. JPMC reserves the right to amend these contentions and supplement its disclosures to the full extent consistent with the Court's Rules and Orders, and in view of any information discovered during litigation and/or any modification or supplementation by Plaintiffs.

II.   IDENTIFICATION OF PRIOR ART REFERENCES[1]

Pursuant to P.R. 3-3(a), JPMC identifies each item of prior art that anticipates or renders obvious one or more of the Asserted Claims of the Asserted Patents.   JPMC may rely on any of the following prior art references in support of any of its defenses, including, without limitation, to demonstrate the state of the art and/or knowledge of a person of ordinary skill in the art.   If the references listed are not identified as items of prior art that anticipate or render obvious an Asserted

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[1]   Copies of these references not previously produced and not part of the corresponding file history are being produced to Plaintiffs' counsel concurrently herewith.

Claim, JPMC intends to rely on these references as background and as evidence of the state of the art at the time of Plaintiff's alleged invention.

JPMC also reserves the right to later rely upon all references or portions of references provided to supplement or amend these disclosures. JPMC incorporates by reference (1) any and all prior art contained or identified in documents produced thus far by Plaintiffs in this or any other proceeding, (2) any and all additional materials regarding or bearing upon invalidity in Plaintiffs' possession or control that have not been produced to date, if any exist, and (3) any and all prior art cited by or invalidity contentions served by defendants in any prior case or concurrent case, including proceedings filed before the Patent Trial and Appeal Board at the United States Patent and Trademark Office.

JPMC further intends to rely on admissions of the named inventors concerning the prior art, including statements found in the Asserted Patents, the prosecution histories, related patents or patent applications, any deposition testimony, and the papers filed and any evidence submitted by Plaintiffs in conjunction with this litigation. JPMC notes that disclosures in the Asserted Patents themselves either anticipate the claimed inventions or render the claimed inventions obvious, either alone or in combination with the knowledge of one of ordinary skill and the prior art references disclosed in these Invalidity Contentions. JPMC may also rely upon statements in the Asserted Patents as admitted prior art.

Prior Art Patent References				
Abbreviation	Patent/ Pub. No.	Country	File/Issue/ Publication Date	Applicable 102 Section
Binder	2003/0156549	US	Filed 1/9/2003 Provisional 1/9/2002 Published 3/4/2008	102(a), (b), and/or (e)

Prior Art Patent References				
Abbreviation	Patent/ Pub. No.	Country	File/Issue/ Publication Date	Applicable 102 Section
Nahata	2005/0125211	US	Filed 11/15/2004 Published 6/9/2005	102(a) and/or (e)
El Husseini	2005/0090243	US	Filed 10/23/2003 Published 4/28/2005	102(a), (b), and/or (e)
Somerville	2005/0047556	US	Filed 8/25/2003 Published 3/3/2005	102(a), (b), and/or (e)
Leung	2006/0009159	US	Filed 7/9/2004 Published 1/12/2006	102(a) and/or (b)
Gray	2005/0108379	US	Filed 8/2/2005 Published 5/19/2005	102(a) and/or (e)
Bagrodia	7,774,440	US	Filed 6/2/2002 Patented 8/10/2010	102(e)
Cooper	5,809,282	US	Filed 6/7/1995 Patented 9/15/1998	102(a), (2), and/or (e)
Liu-1	2006/0072628	US	Filed 9/30/2004 Published 5/30/2006	102(a) and/or (e)
Liu-2	2006/0069544	US	Filed 9/30/2004 Published 3/30/2006	102(a) and/or (e)
Liu-3	2006/0072628	US	Filed 9/30/2004 Published 4/6/2006	102(a) and/or (e)
Liu	Liu-1, Liu-2, and Liu-3	US	*See* Liu-1, Liu-2, Liu-3	102(a) and/or (e)

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Prior Art Publications		
Abbreviation	**Title/Publication Information**	**Publication Date**
WTK 2.1 User's Guide	User's Guide Wireless Toolkit, Version 2.1 Java™ 2 Platform, Micro Edition, Sun Microsystems	2003
Platform Programming	Vartan Piroumian, Wireless J2ME Platform Programming, (Sun Microsystems, Inc.)	2002
Mastering JBuilder	Mike Rozlog, Geoffrey L. Goetz, and Sung Nguyen, Mastering JBuilder (Wiley Publishing Inc.)	2003
Feature Matrix	Borland® JBuilder® 2005 Feature Matrix	2004
de Jode	Martin de Jode, Programming Java 2 Micro Edition on Symbian OS: A Developer's Guide to MIDP 2.0 (Wiley)	2004
Flash MX 2004 Using Flash	Flash MX 2004 Using Flash (Macromedia, Inc.)	9/10/2023
Flash MX 2004 Getting Started with Flash	Flash MX 2004 Getting Started with Flash (Macromedia, Inc.)	September 2003
Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo	Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo (Macromedia, Inc.)	March 2003
Flash MX Professional 2004 Flash Lite User Guide	Flash MX Professional 2004 Flash Lite User Guide (Macromedia, Inc.)	August 2003
Perry	Bill Perry, New Features for Mobile and Devices Developers in Macromedia Flash MX Professional (Macromedia, Inc.)	September 9, 2003 or earlier
David	Matthew David, Building Great Flash MX Games, (Macromedia, Inc.)	2003

Prior Art Publications		
Abbreviation	**Title/Publication Information**	**Publication Date**
Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines	Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines (Macromedia, Inc.)	June 2004
Flash MX Professional 2004 printed publication reference (2003)	Flash MX 2004 Using Flash, Flash MX 2004 Getting Started with Flash, Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo, Flash MX Professional 2004 Flash Lite User Guide, Perry, and David	Collectively, 2003 or earlier
Flash MX Professional 2004 printed publication reference (2004)	Flash MX 2004 Using Flash, Flash MX 2004 Getting Started with Flash, Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo, Flash MX Professional 2004 Flash Lite User Guide, Perry, and David	Collectively, June 2004 or earlier
BlackBerry Simulator	BlackBerry Simulator Version 3.6 User Guide (Research in Motion Ltd.)	4/10/2003 or earlier
Dev. Environment Dev. Guide	BlackBerry Java Development Environment Version 3.6 Developer Guide, Volume 1 – Fundamentals	3/21/2003 or earlier
Dev. Environment Dev. Guide 2	BlackBerry Java Development Environment Version 3.6 Developer Guide – Volume 2 – Advanced Topics	3/24/2003 or earlier
Professional BlackBerry	Craig James Johnston with Richard Evers, Professional BlackBerry (Wiley Publishing Inc.)	2005
Dev. Environment Version 4.0	BlackBerry Java Development Environment Version 4.0	11/26/20004 or earlier
Development Tools Guide	Gary Hillerson, Palm OS® Programming Development Tools Guide (Palm Computing, Inc.)	1/18/2000
Using the Palm OS Emulator	Brian Maas, Using Palm OS® Emulator (Palm Inc.)	2002 or earlier

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Prior Art Publications		
Abbreviation	**Title/Publication Information**	**Publication Date**
Cignetti	Todd L. Cignetti, et al., Energy Estimation Tools for the Palm™ (Department of Computer Science, Duke University)	2000
Palm OS Programming	Neil Rhodes and Julie McKeehan, Palm OS Programming: The Developers Guide (O'Reilly & Associates, Inc.)	2002
MGI PhotoSuite	Jack Kapica, MGI PhotoSuite Mobile Edition	6/19/2001
Palm Documents	Development Tools Guide, Using the Palm OS Emulator, Cignetti, Palm OS Programming, and MGI PhotoSuite	Collectively, 2002 or earlier
Rischpater	Ray Rischpater, Software Development for the QUALCOMM BREW Platform	2003
Starting with BREW	Starting with Brew (QUALCOMM Incorporated)	4/27/2004 or earlier
BREW and J2ME	BREW® and J2ME™: A Complete Solution for Operators Committed to Java™," (QUALCOMM Incorporated)	2003
BREW Documents	Rischpater, Nahata, Starting with BREW, and Brew and J2ME	2004 or earlier
LRA 7.8	LoadRunner Analysis User's Guide, Version 7.8 (Mercury Initiative)	2003
LRC 7.8	LoadRunner Controller User's Guide, Version 7.8 (Mercury Initiative)	2003
LCV 7.8	LoadRunner Creating Vuser Scripts, Version 7.8 (Mercury Initiative)	2003
LRI 7.8	LoadRunner Installation Guide, Version 7.8 (Mercury Initiative)	2003
LoadRunner documents	LRA 7.8, LRC 7.8, LCV 7.8, and LRI 7.8	2003
Milroy	Steve Milroy, et al., .NET Mobile Web Developer's Guide (Syngress Publishing, Inc.)	2002

Prior Art Publications		
Abbreviation	**Title/Publication Information**	**Publication Date**
Barton	John J. Barton and Vikram Vijayaraghavan, UBIWISE, A Simulator for Ubiquitous Computing Systems Design (HP Laboratories Palo Alto)	4/29/2003
Nokia 3650 User Guide	Nokia 3650 User Manual (Nokia)	2003
Nokia N90 User Guide	Nokia N90 User Manual (Nokia)	2005
Nokia 6670 Article	New Nokia Smartphone with Megapixel Camera (Phys.org)	9/22/2004
Nikkarinen	Sami Nikkarinen and Konstantin Shemyak, COSIME: Real-life Cellular Network on the Desktop	2005
Series 60 2nd Editition SDK Release Note	Release Note for Series 60 2nd Edition SDK for Symbian OS, Supporting Feature Pack 3 (Nokia Corporation)	6/17/2005
Series 60 2nd Editition SDK GUI	Series 60 2nd Edition SDK for Symbian OS, Supporting Feature Pack 3: Graphical User Interface (Nokia Corporation)	2005
Series 60 2nd Edition SDK Diagnostics Window	Series 60 2nd Edition SDK for Symbian OS, Supporting Feature Pack 3: Diagnostics Window (Nokia Corporation)	2005
Getting Started with C++ SDKs and Symbian	"Getting Started With C++ SDKs and Symbian Development" (Pearson)	7/23/2004
Series 60 2nd Edition SDK	Series 60 2nd Editition SDK Release Note, Series 60 2nd Editition SDK GUI, Series 60 2nd Edition SDK Diagnostics Window, and ing Started with C++ SDKs and Symbian	June 17, 2005 or earlier

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Prior Art Products		
Abbreviation	**Product**	**Known/Used/On Sale Date**
J2ME Wireless Toolkit 2.1	Java™ 2 Platform, Micro Edition, Wireless Toolkit, Version 2.1	Between 12/5/2003 and 2/7/2004 or earlier
Flash MX Professional 2004 (2003)	Flash MX Professional 2004	9/10/2003 or earlier
Flash MX Professional 2004 (2004)	Flash MX Professional 2004 (with Flash Lite 1.1 update)	6/26/2004 or earlier
BlackBerry System	Blackberry	2003 or earlier
Palm System	Palm OS Emulator	2002 or earlier
LoadRunner system	LoadRunner version 7.8	7/21/2003 or earlier

A.   '192 Patent: Anticipating Prior Art Under 35 U.S.C. § 102

Claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 patent are invalid as anticipated under 35 U.S.C. § 102 in view of the individual prior art references identified in Section III.A.1 below. Attached as Exhibits A1-A18 are claim charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.A.1. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

JPMC's charts, at least in part, are based on the positions taken by Plaintiffs in its Infringement Contentions, though such does not constitute agreement by JPMC with any of JPMC's claim constructions reflected in those contentions. The identification of structure in the prior art is not intended to reflect JPMC's claim construction, either directly or by implication. The references described in Exhibits A1-A18 disclose elements of the asserted claims either

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explicitly or inherently, and also might be relied upon to show the state of the art in the relevant timeframes.

B.   '192 Patent: Obviousness Prior Art Under 35 U.S.C. § 103

JPMC further maintains that claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 patent are invalid as obvious under 35 U.S.C. § 103. Attached as Exhibits A1-A18 are charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.A.2. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

Each anticipatory reference disclosed in Section III.A.1, either alone or in combination with other prior art, also renders the asserted claims invalid as obvious as indicated in the attached charts. The combinations of references do not suggest that any reference included in the combinations is not anticipatory. In particular, each anticipatory reference may be combined with (1) information known to a person of ordinary skill in the art ("POSITA") at the time of the alleged invention, and/or (2) any of the other anticipatory references, and/or (3) the prior art references cited in the '192 patent. The motivation to combine the above listed references as described is provided by the discussions in the cited references, the state of the art discussed in the references, the commonality of the objectives and purposes of the references, and the knowledge of those skilled in the art. In particular, those familiar with mobile device application creation, development, operation and testing would have found reason to combine the references as described above and would have looked to them and their related fields of art if facing the problems and issues described in the '192 patent as applied by Plaintiffs in their infringement contentions. To the extent that Plaintiffs contend that any of the anticipatory references fails to disclose one or

more limitations of the asserted claims, JPMC reserves the right to identify other prior art references that, when combined with the anticipatory reference, would render the asserted claims obvious.

In addition, the asserted claims are invalid under 35 U.S.C. § 103 because they do nothing more than combine known techniques and methods according to their known and ordinary use, with each of the known elements performing in a predictable manner, and the result of the combination being predictable as established in the attached claim charts provided in Exhibits A1-A15.

C.   '864 Patent: Anticipating Prior Art Under 35 U.S.C. § 102

Claims 1, 8, 13, 14, and 17 of the '864 patent are invalid as anticipated under 35 U.S.C. § 102 in view of the individual prior art references identified in Section III.B.1 below. Attached as Exhibits B1-B14 and B18 are claim charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.B.1. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

JPMC's charts, at least in part, are based on the positions taken by Plaintiffs in its Infringement Contentions, though such does not constitute agreement by JPMC with any of JPMC's claim constructions reflected in those contentions. The identification of structure in the prior art is not intended to reflect JPMC's claim construction, either directly or by implication. The references described in Exhibits B1-B14 and B18 disclose elements of the asserted claims either explicitly or inherently, and also might be relied upon to show the state of the art in the relevant timeframes.

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D.   '864 Patent: Obviousness Prior Art Under 35 U.S.C. § 103

JPMC further maintains that claims 1, 8, 13, 14, and 17 of the '864 patent are invalid as obvious under 35 U.S.C. § 103. Attached as Exhibits B1-B14 and B18 are charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.B.2. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

Each anticipatory reference disclosed in Section III.B.1, either alone or in combination with other prior art, also renders the asserted claims invalid as obvious as indicated in the attached charts. The combinations of references do not suggest that any reference included in the combinations is not anticipatory. In particular, each anticipatory reference may be combined with (1) information known to a POSITA at the time of the alleged invention, and/or (2) any of the other anticipatory references, and/or (3) the prior art references cited in the '864 patent. The motivation to combine the above listed references as described is provided by the discussions in the cited references, the state of the art discussed in the references, the commonality of the objectives and purposes of the references, and the knowledge of those skilled in the art. In particular, those familiar with mobile device application creation, development, operation and testing would have found reason to combine the references as described above and would have looked to them and their related fields of art if facing the problems and issues described in the '864 patent as applied by Plaintiffs in their infringement contentions. To the extent that Plaintiffs contend that any of the anticipatory references fails to disclose one or more limitations of the asserted claims, JPMC reserves the right to identify other prior art references that, when combined with the anticipatory reference, would render the asserted claims obvious.

In addition, the asserted claims are invalid under 35 U.S.C. § 103 because they do nothing more than combine known techniques and methods according to their known and ordinary use, with each of the known elements performing in a predictable manner, and the result of the combination being predictable as established in the attached claim charts provided in Exhibits B1-B15.

E.   '678 Patent: Anticipating Prior Art Under 35 U.S.C. § 102

Claims 1-7, 9, 12, 13, 21, and 22 of the '678 patent are invalid as anticipated under 35 U.S.C. § 102 in view of the individual prior art references identified in Section III.C.1 below. Attached as Exhibits C1-C15 and C18 are claim charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.C.1. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

JPMC's charts, at least in part, are based on the positions taken by Plaintiffs in its Infringement Contentions, though such does not constitute agreement by JPMC with any of JPMC's claim constructions reflected in those contentions. The identification of structure in the prior art is not intended to reflect JPMC's claim construction, either directly or by implication. The references described in Exhibits C1-C15 and C18 disclose elements of the asserted claims either explicitly or inherently, and also might be relied upon to show the state of the art in the relevant timeframes.

F.   '678 Patent: Obviousness Prior Art Under 35 U.S.C. § 103

JPMC further maintains that claims 1-7, 9, 12, 13, 21, and 22 of the '678 patent are invalid as obvious under 35 U.S.C. § 103. Attached as Exhibits C1-C15 and C18 are charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section

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III.C.2. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

Each anticipatory reference disclosed in Section III.C.2, either alone or in combination with other prior art, also renders the asserted claims invalid as obvious as indicated in the attached charts. The combinations of references do not suggest that any reference included in the combinations is not anticipatory. In particular, each anticipatory reference may be combined with (1) information known to POSITA at the time of the alleged invention, and/or (2) any of the other anticipatory references, and/or (3) the prior art references cited in the '678 patent. The motivation to combine the above listed references as described is provided by the discussions in the cited references, the state of the art discussed in the references, the commonality of the objectives and purposes of the references, and the knowledge of those skilled in the art. In particular, those familiar with mobile device application creation, development, operation and testing would have found reason to combine the references as described above and would have looked to them and their related fields of art if facing the problems and issues described in the '678 patent as applied by Plaintiffs in their infringement contentions. To the extent that Plaintiffs contend that any of the anticipatory references fails to disclose one or more limitations of the asserted claims, JPMC reserves the right to identify other prior art references that, when combined with the anticipatory reference, would render the asserted claims obvious.

In addition, the asserted claims are invalid under 35 U.S.C. § 103 because they do nothing more than combine known techniques and methods according to their known and ordinary use, with each of the known elements performing in a predictable manner, and the result of the

combination being predictable as established in the attached claim charts provided in Exhibits C1-C15.

G.   '678 Patent: Invalidity Under Obviousness-Type Double Patenting

Claims 1-7, 9, 12, 13, 21, and 22 of the '811 Patent are invalid as obvious over claims 1-7, 9, 12, and 13 of the '192 Patent in view of certain prior art references identified in Section III.C.2 below. Attached as Exhibits C-15a through C-15e are claim charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.C.2. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

Nonstatutory obviousness-type double patenting ("ODP") is judicially created doctrine grounded in public policy to prevent an unjustified or improper timewise extension of the right exclude granted by a patent. *In re Cellect*, 81 F.4th 1216, 1226 (Fed. Cir. 2023). Where separate applications for overlapping subject matter have different expiration dates, "the doctrine of obviousness-type double patenting ensures that a particular invention (and obvious variants thereof) does not receive an undue patent term extension." *Abbvie Inc. v. Mathilda and Terence Kennedy Institute of Rheumatology Trust*, 764 F.3d 1366, 1373 (Fed. Cir. 2014). As the Federal Circuit recently confirmed, "ODP for a patent that has received PTA, regardless whether or not a terminal disclaimer is required or has been filed, must be based on the expiration date of the patent after PTA has been added." *Cellect*, 81 F.4th at 1216.

JPMC's charts, at least in part, are based on the positions taken by Plaintiffs in its Infringement Contentions, though such does not constitute agreement by JPMC with any of JPMC's claim constructions reflected in those contentions. The identification of structure in the prior art is not intended to reflect JPMC's claim construction, either directly or by implication.

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The references described in Exhibits D1-D14 and D18 disclose elements of the asserted claims either explicitly or inherently, and also might be relied upon to show the state of the art in the relevant timeframes.

H.   '811 Patent: Anticipating Prior Art Under 35 U.S.C. § 102

Claims 1, 2, 4, 5, 8, 9, 22, 24, and 26 of the '811 Patent are invalid as anticipated under 35 U.S.C. § 102 in view of the individual prior art references identified in Section III.D.1 below. Attached as Exhibits D1-D14 and D18 are claim charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.D.1. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

JPMC's charts, at least in part, are based on the positions taken by Plaintiffs in its Infringement Contentions, though such does not constitute agreement by JPMC with any of JPMC's claim constructions reflected in those contentions. The identification of structure in the prior art is not intended to reflect JPMC's claim construction, either directly or by implication. The references described in Exhibits D1-D14 and D18 disclose elements of the asserted claims either explicitly or inherently, and also might be relied upon to show the state of the art in the relevant timeframes.

I.   '811 Patent: Obviousness Prior Art Under 35 U.S.C. § 103

JPMC further maintains that claims 1, 2, 4, 5, 8, 9, 22, 24, and 26 of the '811 patent are invalid as obvious under 35 U.S.C. § 103. Attached as Exhibits D1-D14 and D18 are charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.D.2. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information

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gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

Each anticipatory reference disclosed in Section III.D.1, either alone or in combination with other prior art, also renders the asserted claims invalid as obvious as indicated in the attached charts. The combinations of references do not suggest that any reference included in the combinations is not anticipatory. In particular, each anticipatory reference may be combined with (1) information known to a POSITA at the time of the alleged invention, and/or (2) any of the other anticipatory references, and/or (3) the prior art references cited in the '811 patent. The motivation to combine the above listed references as described is provided by the discussions in the cited references, the state of the art discussed in the references, the commonality of the objectives and purposes of the references, and the knowledge of those skilled in the art. In particular, those familiar with mobile device application creation, development, operation and testing would have found reason to combine the references as described above and would have looked to them and their related fields of art if facing the problems and issues described in the '811 patent as applied by Plaintiffs in their infringement contentions. To the extent that Plaintiffs contend that any of the anticipatory references fails to disclose one or more limitations of the asserted claims, JPMC reserves the right to identify other prior art references that, when combined with the anticipatory reference, would render the asserted claims obvious.

In addition, the asserted claims are invalid under 35 U.S.C. § 103 because they do nothing more than combine known techniques and methods according to their known and ordinary use, with each of the known elements performing in a predictable manner, and the result of the combination being predictable as established in the attached claim charts provided in Exhibits D1-D15.

J. **'579 Patent: Anticipating Prior Art Under 35 U.S.C. § 102**

Claims 15-20, 25-29, 33, and 34 of the '579 patent are invalid as anticipated under 35 U.S.C. § 102 in view of the individual prior art references identified in Section III.E.1 below. Attached as Exhibits E1-E15, are claim charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.E.1. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

JPMC's charts, at least in part, are based on the positions taken by Plaintiffs in its Infringement Contentions, though such does not constitute agreement by JPMC with any of JPMC's claim constructions reflected in those contentions. The identification of structure in the prior art is not intended to reflect JPMC's claim construction, either directly or by implication. The references described in Exhibits E1-E15 disclose elements of the asserted claims either explicitly or inherently, and also might be relied upon to show the state of the art in the relevant timeframes.

K. **'579 Patent: Obviousness Prior Art Under 35 U.S.C. § 103**

JPMC further maintains that claims 15-20, 25-29, 33, and 34 of the '579 patent are invalid as obvious under 35 U.S.C. § 103. Attached as Exhibits E1-E15 are charts specifically identifying where each element of the asserted claims can be found in the prior art listed in Section III.E.2. JPMC reserves the right to modify these charts by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations, through discovery, or in light of arguments made or positions taken by Plaintiffs.

Each anticipatory reference disclosed in Section III.E.1, either alone or in combination with other prior art, also renders the asserted claims invalid as obvious as indicated in the attached charts. The combinations of references do not suggest that any reference included in the combinations is not anticipatory. In particular, each anticipatory reference may be combined with (1) information known to a POSITA at the time of the alleged invention, and/or (2) any of the other anticipatory references, and/or (3) the prior art references cited in the '579 patent. The motivation to combine the above listed references as described is provided by the discussions in the cited references, the state of the art discussed in the references, the commonality of the objectives and purposes of the references, and the knowledge of those skilled in the art. In particular, those familiar with mobile device application creation, development, operation and testing would have found reason to combine the references as described above and would have looked to them and their related fields of art if facing the problems and issues described in the '579 patent as applied by Plaintiffs in their infringement contentions. To the extent that Plaintiffs contend that any of the anticipatory references fails to disclose one or more limitations of the asserted claims, JPMC reserves the right to identify other prior art references that, when combined with the anticipatory reference, would render the asserted claims obvious.

In addition, the asserted claims are invalid under 35 U.S.C. §1 03 because they do nothing more than combine known techniques and methods according to their known and ordinary use, with each of the known elements performing in a predictable manner, and the result of the combination being predictable as established in the attached claim charts provided in Exhibits E1-E15.

L.   State of the Art

Each of the elements in the Asserted Claims was already well known by the alleged invention date of the Asserted Patents. Accordingly, the Asserted Patents are nothing more than a

recitation of knowledge that was well-known in the industry, and are at best, a recitation of well-known features and functionalities that took no more than ordinary skill in the art to arrange in a known manner using conventional techniques.

For example, at the time of the alleged invention, developing Flash content for Palm devices was already well known. *See, e.g.,* "Pro File: MX in the Mix," Macworld (Apr. 4, 2003), JPMC-00166084; Content Development Kit for Sony CLIÉ FMX Pro 2004 CDK for Sony CLIÉ; Interface Development Kit for Sony CLIÉ FMX Pro 2004 IDK for Sony CLIÉ, JPMC-00166090-JPMC-00166165. Similarly, development Flash for the following products/platforms was also well known:

- NTT DoCoMo i-mode phones

- Sony CLIE (Palm OS)

- Pocket PC 2002

- Motorola A920

- Nokia 9200 Communicator Series

- Flash Lite 1.1

(JPMC-00166166-JPMC-00166325).

In addition to the prior art references and systems identified above and charted in the attached exhibits, JPMC reserves the right to rely on discussions of the state of the art and prior art for the Asserted Patents and their respective file histories, including any prior art cited in the file histories, in explaining the state of the art and the ways that each respective reference corresponds with the Asserted Claims. The following is an exemplary list of prior art relevant to the state of the art at the time of the claimed invention and JPMC reserves the right to rely on any other reference for any purpose, including to establish the state of the art in the relevant timeframe.

Author/ Inventor	Title	Publication Date	Publisher	Bates Range
Jiang Yu	Location-based Services Testing with A Scalable Test Framework	Fall 2005	University of Alberta Library	JPMC-00164744-JPMC-00164940
	BlackBerry Java Development Environment Version 3.6 Developer Guide Volume 2 - Advanced Topics	Last modified March 24, 2003 (copyright 2003)	Research in Motion Ltd.	JPMC-00165189-JPMC-00165376
	BlackBerry Java Development Environment Version 4.0 Release Notes and Known Issues	copyright 2004	Research in Motion Ltd.	JPMC-00165551-JPMC-00165562
	BlackBerry Software Development Kit Version 2.5 Developer Guide	Last modified July 18, 2002 (copyright 2002)	Research in Motion Ltd.	JPMC-00165563-JPMC-00165700
Hyrum D. Carroll	A Trace-Driven Simulator for Palm OS Devices	September 2004	Department of Computer Science Brigham Young University	JPMC-00154485-JPMC-00154547
Written by Greg Wilson and Jean Ostrem	Palm OS Programmer's Companion	Copyright 1996-2002	PalmSource, Inc. and its affilates	JPMC-00162560-JPMC-00163263
Ray Lai	J2EE Platform Web Services	Copyright 2004	Sun Microsystems, Inc.	JPMC-00158942-JPMC-00159537
Qusay H, Mahmoud	Learning Wireless Java	Copyright 2002	O'Reilly & Associates	JPMC-00152418-JPMC-00152683
	Developing Mobile Applications JBuilder 2005	Copyright 1997-2004	Borland Software Corporation	JPMC-00159543-JPMC-00159774
	User's Guide Optimizeit Profiler	Copyright 1997-2004	Borland Software Corporation	JPMC-00159807-JPMC-00159858

	Starting with BREW Wayback screenshot	May 29, 2004	Qualcomm	JPMC-00163796-JPMC-00163796
	Wayback Machine - Getting Started with BREW	May 27, 2005	Qualcomm	JPMC-00164307-JPMC-00164308
Nordenstam	U.S. Patent No. 6,442,615	August 27, 2002	Ericsson	JPMC-00164203-JPMC-00164225
	Flash MX 2004 ActionScript Reference Guide	November 2003	Macromedia, Inc.	JPMC-00155935-JPMC-00156724
	Flash MX 2004 Using Components	September 10, 2003	Macromedia, Inc.	JPMC-00156915-JPMC-00157596
	Flash MX Tutorials	February 2002	Macromedia, Inc.	JPMC-00155835-JPMC-00155924
Klevans	U.S. Patent No. 7,047,176	Filed 5/4/2001 Issued May 16, 2006	Fujitsu	JPMC-00164226-JPMC-00164240
Gurdy Leete & Ellen Finkelstein	Macromedia Flash MX For Dummies	Copyright 2002	Wiley Publishing, Inc.	JPMC-00152684-JPMC-00153091
Ellen Finkelstein & Gurdy Leete	Macromedia Flash MX 2004 for Dummies	Copyright 2004	Wiley Publishing, Inc.	JPMC-00153092-JPMC-00153508
Damon Dean & Andy Cowitt	Macromedia Studio MX 2004 All-in-One Desk Reference for Dummies	Copyright 2004	Wiley Publishing, Inc.	JPMC-00160430-JPMC-00161319
Glen Rhodes	Macromedia Flash MX 2004 Game Development	Copyright 2004	Charles River Media, Inc.	JPMC-00153509-JPMC-00154032
	Release Note for Series 60 2nd Edition SDK for Symbian OS, Supporting Feature Pack 3	June 17, 2005	Nokia	JPMC-00163336-JPMC-00163340
	Series 60 2nd Edition SDK for Symbian OS, Supporting Feature Pack 3: Graphical User Interface	Copyright 2005	Nokia	JPMC-00163341-JPMC-00163347
	Nokia 6630 User Manual	Copyright 2004	Nokia	JPMC-00161751-JPMC-00161870
	Nokia 6670 User Guide	Copyright 2004	Nokia	JPMC-00162013-JPMC-00162143

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	Sony Ericsson K700 User Manual	October 2004	Sony Ericsson	JPMC-00163699-JPMC-00163795
	New Nokia Smartphone with Megapixel Camera	September 22, 2004	Phys.org	JPMC-00161509-JPMC-00161510
	Twist and Shoot: Nokia N90	April 27, 2005	Phys.org	JPMC-00161871-JPMC-00161873

III.   IDENTIFICATION OF ANTICIPATION AND OBVIOUSNESS GROUNDS

Pursuant to P.R. 3.3(b), JPMC identifies whether each identified prior art item that anticipates each Asserted Claim or renders it obvious. Each Asserted Claim is anticipated, either expressly or inherently, by, or obvious in view of, one or more items of prior art identified in these disclosures, alone or in combination with other references identified herein. JPMC reserves the right to exchange or otherwise modify the specific references relied upon for anticipation and within each obviousness combination for each Asserted Claim.

A.   The '192 Patent

1.   Anticipatory Art Under 35 U.S.C. § 102

The following references anticipate asserted one or more of asserted claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 patent:

Reference that Anticipates Asserted Claims of '192 Patent Under Section 102	Claims Anticipated	Exhibit No.
WTK 2.1	1-7, 9, 12, 13, 60-62, and 65	A-1a
WTK 2.1 Guide	1-7, 9, 12, and 13	A-1b
Binders	1-7, 9, and 13	A-2a
de Jode	1-7, 9, 12, 13, 60-62, and 65	A-3a
Flash MX Professional 2004 (2003) (system)	1-7, 9, 12, and 13	A-4a
Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, and 13	A-4b
Flash MX Professional 2004 (2004) (system)	1-7, 9, 12, and 13	A-4c

Reference that Anticipates Asserted Claims of '192 Patent Under Section 102	Claims Anticipated	Exhibit No.
Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, and 13	A-4d
BlackBerry Simulator	1-7, 9, 12, and 13	A-5a
Dev Environment Dev. Guide	1-7, 9	A-5b
Professional BlackBerry	1-7, 9, and 13	A-5e
Development Environment Version 4.0	1-7, 9, and 12	A-5f
BlackBerry System	1-7, 9, 12, 13, 60-62, 65	A-5h
Palm System	1-7, 9, 12, 13, 60-62, and 65	A-6a
Palm Documents	1-7, 9, 12, 13, 60-62, and 65	A-6b
Development Tools Guide	1-7, and 9	A-6c
Using the Palm Emulator	1-7, and 9	A-6d
Cignetti	1	A-6e
Palm OS Programming	1-7, 9, 12, and 13	A-6f
MGI PhotoSuite	60-62, and 65	A-6g
BREW Documents	1-7, 9, 12, 13, 60-62, and 65	A-7a
Nahata	1-7, 9, 12, 13, 60-62, and 65	A-7c
Rischpater	1-7, 9, 12, 13, 60-62, and 65	A-7e
Starting with BREW	1-7, 9, 13, 60-62, and 65	A-7g
LoadRunner system	1-7, 9, 12, and 13	A-8a
LoadRunner documents	1-7, 9, 12, and 13	A-8b
GATE II / MATE documents	1-7, 9, 12, and 13	A-9a
Milroy	1-7, 9, 12, 13, 60-62, and 65	A-10a
El Husseini	1-7, 9, 12, and 13	A-11a
Barton	1-7, 9	A-12a
Somerville	1-7, 9, and 13	A-13a
Leung	1-7, 9, 12, and 13	A-14a

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Reference that Anticipates Asserted Claims of '192 Patent Under Section 102	Claims Anticipated	Exhibit No.
Nokia 3650 User Guide	60-62, and 65	A-15a
Nokia N90 User Guide	60-62, and 65	A-16a
Nokia 6670 Article	60-62, and 65	A-17a
Nikkarinen	1-7, 9, 12, and 13	A-18a

Exhibits A1-A18 include claim charts that identify where specifically in each alleged item of prior art each limitation of each asserted claim is found.

2. Obviousness Prior Art Under 35 U.S.C. § 103

The following references alone and/or in combination render obvious one or more of asserted claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 patent:

Reference or Combination of Prior Art References That Renders Asserted Claims of '192 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
WTK 2.1	1-7, 9, 12, 13, 60-62, and 65	A-1a
WTK 2.1 Guide	1-7, 9, 12, and 13	A-1b
Binders	1-7, 9, and 13	A-2a
de Jode	1-7, 9, 12, 13, 60-62, and 65	A-3a
Flash MX Professional 2004 (2003) (system)	1-7, 9, 12, and 13	A-4a
Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, and 13	A-4b
Flash MX Professional 2004 (2004) (system)	1-7, 9, 12, and 13	A-4c
Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, and 13	A-4d
BlackBerry Simulator	1-7, 9, 12, and 13	A-5a
Dev Environment Dev. Guide	1-7, 9	A-5b
Professional BlackBerry	1-7, 9, and 13	A-5e

Reference or Combination of Prior Art References That Renders Asserted Claims of '192 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Development Environment Version 4.0	1-7, 9, and 12	A-5f
BlackBerry System	1-7, 9, 12, 13, 60-62, 65	A-5h
Palm System	1-7, 9, 12, 13, 60-62, and 65	A-6a
Palm Documents	1-7, 9, 12, 13, 60-62, and 65	A-6b
Development Tools Guide	1-7, and 9	A-6c
Using the Palm Emulator	1-7, and 9	A-6d
Cignetti	1	A-6e
Palm OS Programming	1-7, 9, 12, and 13	A-6f
MGI PhotoSuite	60-62, and 65	A-6g
BREW Documents	1-7, 9, 12, 13, 60-62, and 65	A-7a
Nahata	1-7, 9, 12, 13, 60-62, and 65	A-7c
Rischpater	1-7, 9, 12, 13, 60-62, and 65	A-7e
Starting with BREW	1-7, 9, 13, 60-62, and 65	A-7g
LoadRunner system	1-7, 9, 12, and 13	A-8a
LoadRunner documents	1-7, 9, 12, and 13	A-8b
GATE II / MATE documents	1-7, 9, 12, and 13	A-9a
Milroy	1-7, 9, 12, 13, 60-62, and 65	A-10a
El Husseini	1-7, 9, 12, and 13	A-11a
Barton	1-7, 9	A-12a
Somerville	1-7, 9, and 13	A-13a
Leung	1-7, 9, 12, and 13	A-14a
Nokia 3650 User Manual	60-62, and 65	A-15a

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Reference or Combination of Prior Art References That Renders Asserted Claims of '192 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Nokia N90 User Manual	60-62, and 65	A-16a
Nokia 6670 Article	60-62, and 65	A-17a
Nikkarinen	1-7, 9, 12, and 13	A-18a
WTK 2.1 and Binder	1-7, 9, 12, and 13	A-1c
WTK 2.1 and Platform Programming	1-7, 9, 12, 13, and 60-62	A-1d
WTK 2.1 and Mastering JBuilder	1-7, 9, 12, 13, and 60	A-1e
WTK 2.1, Mastering JBuilder and Feature Matrix	1-7, 9, 12, 13, and 60	A-1f
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, and 13	A-1g
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, and 13	A-1h
de Jode and Mastering JBuilder	1-7, 9, 12, 13, 60-62, 65	A-3b
de Jode and Noble	1-7, 9, 12, 13, 60-62, 65	A-3c
de Jode, Noble, and Mastering JBuilder	1-7, 9, 12, 13, 60-62, and 65	A-3d
de Jode and WTK 2.1	1-7, 9, 12, 13, 60-62, and 65	A-3e
de Jode, WTK 2.1, and Mastering JBuilder	1-7, 9, 12, 13, 60-62, and 65	A-3f
de Jode, WTK 2.1, and Moble	1-7, 9, 12, 13, 60-62, and 65	A-3g
de Jode, WTK 2.1, Noble and JBuilder	1-7, 9, 12, 13, 60-62, and 65	A-3h
de Jode and Nikkarinen	1-7, 9, 12, 13, 60-62, and 65	A-3j
de Jode, Nikkarinen, and Mastering JBuilder	1-7, 9, 12, 13, 60-62, and 65	A-3k
de Jode, Nikkarinen, and WTK 2.1	1-7, 9, 12, 13, 60-62, and 65	A-3m

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Reference or Combination of Prior Art References That Renders Asserted Claims of '192 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
de Jode, Nikkarinen, WTK 2.1 and Mastering JBuilder	1-7, 9, 12, 13, 60-62, and 65	A-3n
de Jode and Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, and 13	A-3o
de Jode and Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, and 13	A-3p
Flash MX Professional 2004 printed publication reference (2004) and Nikkarinen	1-7, 9, 12, and 13	A-4e
Flash MX Professional 2004 printed publication reference (2004), Nikkarinen, and El Husseini	1-7, 9, 12, and 13	A-4f
Flash MX Professional 2004 printed publication reference (2003) and Mastering JBuilder	1-7, 9, 12, and 13	A-4g
Flash MX Professional 2004 printed publication reference (2004) and Mastering JBuilder	1-7, 9, 12, and 13	A-4h
BlackBerry Simulator and Dev. Environment Dev. Guide	1-7, 9, 12, and 13	A-5c
BlackBerry Simulator, Dev. Environment Dev. Guide, and Dev. Environment Dev. Guide 2	1-7, 9, 12, and 13	A-5d
Development Environment Version 4.0 and Professional BlackBerry	1-7, 9, 12, and 13	A-5g
BlackBerry System and Mastering JBuilder	1-7, 9, 12, 13, 60-62, and 65	A-5j
Palm System and Palm Documents	1-7, 9, 12, 13, 60-62, and 65	A-6h
Palm Documents and Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, 13, 60-62, and 65	A-6i
Palm Documents and Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, 13, 60-62, and 65	A-6j
Palm System, Palm Documents, and Mastering JBuilder	1-7, 9, 12, 13, 60-62, and 65	A-6k
BREW and WTK 2.1	1-7, 9, 12, 13, 60-62, and 65	A-7b

Reference or Combination of Prior Art References That Renders Asserted Claims of '192 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Nahata and WTK 2.1	1-7, 9, 13, 60-62, and 65	A-7d
Rischpater and WTK 2.1	1-7, 9, 13, 60-62, and 65	A-7f
Starting with BREW and WTK 2.1	1-7, 9, 13, 60-62, and 65	A-7h
LoadRunner documents and Milroy	1-7, 9, 12, 13, 60-62 and 65	A-8c
LoadRunner documents and WTK 2.1	1-7, 9, 12, 13, 60-62, and 65	A-8d
LoadRunner documents and El Husseini	1-7, 9, 12, and 13	A-8e
Nokia 3650 User Guide and BREW Documents	60-62 and 65	A-15b
Nokia 3650 User Guide and de Jode	60-62 and 65	A-15c
Nokia 3650 User Guide and WTK 2.1	60-62 and 65	A-15d
Nokia N90 Guide and BREW Documents	60-62 and 65	A-16b
Nokia N90 Guide and de Jode	60-62 and 65	A-16c
Nokia N90 Guide and WTK 2.1	60-62 and 65	A-16d
Nokia 6670 Article and BREW Documents	60-62 and 65	A-17b
Nokia 6670 Article and de Jode	60-62 and 65	A-17c
Nokia 6670 Article and WTK 2.1	60-62 and 65	A-17d

The above table represents different references and combinations of prior art references that either individually or in combination disclose each element of the asserted claims of the '192 patent and renders those claims obvious. Exhibits A1-A18 include claim charts that identify where specifically in each alleged combinations of prior art each limitation of each asserted claim is found, as well as identifying motivations to combine multiple prior art references.

B.   **The '864 Patent**

1.   **Anticipatory Art Under 35 U.S.C. § 102**

The following references anticipate one or more of asserted claims 1, 8, 13, 14, and 17 of

the '864 patent:

Reference that Anticipates Asserted Claims of '864 Patent Under Section 102	Claims Anticipated	Exhibit No.
WTK 2.1	1, 8, 13, 14, and 17	B-1a
WTK2.1 Guide	1, 8, 13, 14, and 17	B-1b
Binder	1, 8, 13, 14, and 17	B-2a
de Jode	1, 8, 13, 14, and 17	B-3a
Flash MX Professional 2004 (2003) (system)	1, 8, 13, 14, and 17	B-4a
Flash MX Professional 2004 printed publication reference (2003)	1, 8, 13, 14, and 17	B-4b
Flash MX Professional 2004 (2004) (system)	1, 8, 13, 14, and 17	B-4c
Flash MX Professional 2004 printed publication reference (2004)	1, 8, 13, 14, and 17	B-4d
BlackBerry Simulator	1, 8, 13, 14, and 17	B-5a
Dev Environment Dev. Guide	1, 8, 13, 14, and 17	B-5b
Professional BlackBerry	1, 8, 13, 14, and 17	B-5e
Development Environment Version 4.0	1, 8, 13, 14, and 17	B-5f
BlackBerry System	1, 8, 13, 14, and 17	B-5h
Palm System	1, 8, 13, 14, and 17	B-6a
Palm Documents	1, 8, 13, 14, and 17	B-6b
Development Tools Guide	1, 8, 13, 14, and 17	B-6c
Using the Palm Emulator	1, 13, 14, and 17	B-6d
Cignetti	1	B-6e
Palm OS Programming	1, 8, 13, 14, and 17	B-6f
BREW Documents	1, 8, 13, 14, and 17	B-7a

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Reference that Anticipates Asserted Claims of '864 Patent Under Section 102	Claims Anticipated	Exhibit No.
Nahata	1, 8, 13, 14, and 17	B-7c
Rischpater	1, 8, 13, 14, and 17	B-7e
Starting with BREW	1, 8, 13, 14, and 17	B-7g
LoadRunner system	1, 8, 13, 14, and 17	B-8a
LoadRunner documents	1, 8, 13, 14, and 17	B-8b
GATE II / MATE documents	1, 8, 13, 14, and 17	B-9a
Milroy	1, 8, 13, 14, and 17	B-10a
El Husseini	1, 8, 13, 14, and 17	B-11a
Barton	1, 8, 13, and 17	B-12a
Somerville	1, 8, 13, and 17	B-13a
Leung	1, 8, 13, and 17	B-14a
Nikkarinen	1, 8, 13, 14, and 17	B-18a

Exhibits B1-B14 and B18 include claim charts that identify where specifically in each alleged item of prior art each limitation of each asserted claim is found.

2.   Obviousness Prior Art Under 35 U.S.C. § 103

The following references alone and/or in combination render obvious one or more of asserted claims 1, 8, 13, 14, and 17 of the '864 patent:

Reference or Combination of Prior Art References That Renders Asserted Claims of '864 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
WTK 2.1	1, 8, 13, 14, and 17	B-1a
WTK2.1 Guide	1, 8, 13, 14, and 17	B-1b
Binder	1, 8, 13, 14, and 17	B-2a
de Jode	1, 8, 13, 14, and 17	B-3a
Flash MX Professional 2004 (2003) (system)	1, 8, 13, 14, and 17	B-4a

Reference or Combination of Prior Art References That Renders Asserted Claims of '864 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Flash MX Professional 2004 printed publication reference (2003)	1, 8, 13, 14, and 17	B-4b
Flash MX Professional 2004 (2004) (system)	1, 8, 13, 14, and 17	B-4c
Flash MX Professional 2004 printed publication reference (2004)	1, 8, 13, 14, and 17	B-4d
BlackBerry Simulator	1, 8, 13, 14, and 17	B-5a
Dev Environment Dev. Guide	1, 8, 13, 14, and 17	B-5b
Professional BlackBerry	1, 8, 13, 14, and 17	B-5e
Development Environment Version 4.0	1, 8, 13, 14, and 17	B-5f
BlackBerry System	1, 8, 13, 14, and 17	B-5h
Palm System	1, 8, 13, 14, and 17	B-6a
Palm Documents	1, 8, 13, 14, and 17	B-6b
Development Tools Guide	1, 8, 13, 14, and 17	B-6c
Using the Palm Emulator	1, 13, 14, and 17	B-6d
Cignetti	1	B-6e
Palm OS Programming	1, 8, 13, 14, and 17	B-6f
BREW Documents	1, 8, 13, 14, and 17	B-7a
Nahata	1, 8, 13, 14, and 17	B-7c
Rischpater	1, 8, 13, 14, and 17	B-7e
Starting with BREW	1, 8, 13, 14, and 17	B-7g
LoadRunner system	1, 8, 13, 14, and 17	B-8a
LoadRunner documents	1, 8, 13, 14, and 17	B-8b
GATE II / MATE documents	1, 8, 13, 14, and 17	B-9a
Milroy	1, 8, 13, 14, and 17	B-10a
El Husseini	1, 8, 13, 14, and 17	B-11a
Barton	1, 8, 13, and 17	B-12a

Reference or Combination of Prior Art References That Renders Asserted Claims of '864 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Somerville	1, 8, 13, and 17	B-13a
Leung	1, 8, 13, and 17	B-14a
Nikkarinen	1, 8, 13, 14, and 17	B-18a
WTK 2.1 and Binder	1, 8, 13, 14, and 17	B-1c
WTK 2.1 and Platform Programming	1, 8, 13, 14, and 17	B-1d
WTK 2.1 and Mastering JBuilder	1, 8, 13, 14, and 17	B-1e
WTK 2.1, Mastering JBuilder and Feature Matrix	1, 8, 13, 14, and 17	B-1f
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2003)	1, 8, 13, 14, and 17	B-1g
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2004)	1, 8, 13, 14, and 17	B-1h
de Jode and Mastering JBuilder	1, 8, 13, 14, and 17	B-3b
de Jode and Noble	1, 8, 13, 14, and 17	B-3c
de Jode, Noble, and Mastering JBuilder	1, 8, 13, 14, and 17	B-3d
de Jode and WTK 2.1	1, 8, 13, 14, and 17	B-3e
de Jode, WTK 2.1, and Mastering JBuilder	1, 8, 13, 14, and 17	B-3f
de Jode, WTK 2.1, and Moble	1, 8, 13, 14, and 17	B-3g
de Jode, WTK 2.1, Noble and JBuilder	1, 8, 13, 14, and 17	B-3h
de Jode and Nikkarinen	1, 8, 13, 14, and 17	B-3j
de Jode, Nikkarinen, and Mastering JBuilder	1, 8, 13, 14, and 17	B-3k
de Jode, Nikkarinen, and WTK 2.1	1, 8, 13, 14, and 17	B-3m
de Jode, Nikkarinen, WTK 2.1 and Mastering JBuilder	1, 8, 13, 14, and 17	B-3n
de Jode and Flash MX Professional 2004 printed publication reference (2003)	1, 8, 13, 14, and 17	B-3o
de Jode and Flash MX Professional 2004 printed publication reference (2004)	1, 8, 13, 14, and 17	B-3p

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Reference or Combination of Prior Art References That Renders Asserted Claims of '864 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Flash MX Professional 2004 printed publication reference (2004) and Nikkarinen	1, 8, 13, 14, and 17	B-4e
Flash MX Professional 2004 printed publication reference (2004), Nikkarinen, and El Husseini	1, 8, 13, 14, and 17	B-4f
Flash MX Professional 2004 printed publication reference (2003) and Mastering JBuilder	1, 8, 13, 14, and 17	B-4g
Flash MX Professional 2004 printed publication reference (2004) and Mastering JBuilder	1, 8, 13, 14, and 17	B-4h
BlackBerry Simulator and Dev. Environment Dev. Guide	1, 8, 13, 14, and 17	B-5c
BlackBerry Simulator, Dev. Environment Dev. Guide, and Dev. Environment Dev. Guide 2	1, 8, 13, 14, and 17	B-5d
Development Environment Version 4.0 and Professional BlackBerry	1, 8, 13, 14, and 17	B-5g
Blackberry System and Mastering JBuilder	1, 8, 13, 14, and 17	B-5j
Palm System and Palm Documents	1, 8, 13, 14, and 17	B-6h
Palm Documents and Flash MX Professional 2004 printed publication reference (2003)	1, 8, 13, 14, and 17	B-6i
Palm Documents and Flash MX Professional 2004 printed publication reference (2004)	1, 8, 13, 14, and 17	B-6j
Palm System, Palm Documents, and Mastering JBuilder	1, 8, 13, 14, and 17	B-6k
BREW Documents and WTK 2.1	1, 8, 13, 14, and 17	B-7b
Nahata and WTK 2.1	1, 8, 13, 14, and 17	B-7d
Rischpater and WTK 2.1	1, 8, 13, 14, and 17	B-7f
Starting with BREW and WTK 2.1	1, 8, 13, 14, and 17	B-7h
LoadRunner documents and Milroy	1, 8, 13, 14, and 17	B-8c
LoadRunner documents and WTK 2.1	1, 8, 13, 14, and 17	B-8d
LoadRunner documents and El Husseini	1, 8, 13, 14, and 17	B-8e

The above table represents different references and combinations of prior art references that either individually or in combination disclose each element of the asserted claims of the '864 patent and renders those claims obvious. Exhibits B1-B14 and B18 include claim charts that identify where specifically in each alleged combinations of prior art each limitation of each asserted claim is found, as well as identifying motivations to combine multiple prior art references.

C.   The '678 Patent

1.   Anticipatory Art Under 35 U.S.C. § 102

The following references anticipate one or more of asserted claims 1-7, 9, 12, 13, 21, and 22 of the '678 patent:

Reference that Anticipates Asserted Claims of '678 Patent Under Section 102	Claims Anticipated	Exhibit No.
WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-1a
WTK2.1 Guide	1-7, 9, 12, 13, 21, and 22	C-1b
Binder	1-7, 9, 13, 21, and 22	C-2a
de Jode	1-7, 9, 12, 13, 21, and 22	C-3a
Flash MX Professional 2004 (2003) (system)	1-7, 9, 12, 13, 21, and 22	C-4a
Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, 13, 21, and 22	C-4b
Flash MX Professional 2004 (2004) (system)	1-7, 9, 12, 13, 21, and 22	C-4c
Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, 13, 21, and 22	C-4d
BlackBerry Simulator	1-7, 9, 12, 13, 21, and 22	C-5a
Dev Environment Dev. Guide	1-7, 9, 21, and 22	C-5b
Professional BlackBerry	1-7, 9, 13, 21, and 22	C-5e
Development Environment Version 4.0	1-7, 9, 12, 21, and 22	C-5f
BlackBerry System	1-7, 9, 12, 13, 21, and 22	C-5h
Palm System	1-7, 9, 12, 13, 21, and 22	C-6a

Reference that Anticipates Asserted Claims of '678 Patent Under Section 102	Claims Anticipated	Exhibit No.
Palm Documents	1-7, 9, 12, 13, 21, and 22	C-6b
Development Tools Guide	1-7, 9, and 21	C-6c
Using the Palm Emulator	1-7, 9, 21, and 22	C-6d
Cignetti	1, 21, and 22	C-6e
Palm OS Programming	1-7, 9, 12, 13, 21, and 22	C-6f
BREW Documents	1-7, 9, 12, 13, 21, and 22	C-7a
Nahata	1-7, 9, 12, 13, 21, and 22	C-7c
Rischpater	1-7, 9, 12, 13, 21, and 22	C-7e
Starting with BREW	1-7, 9, 12, 13, 21, and 22	C-7g
LoadRunner system	1-7, 9, 12, 13, 21, and 22	C-8a
LoadRunner documents	1-7, 9, 12, 13, 21, and 22	C-8b
GATE II / MATE documents	1-7, 9, 12, 13, 21, and 22	C-9a
Milroy	1-7, 9, 12, 13, 21, and 22	C-10a
El Husseini	1-7, 9, 12, 13, 21, and 22	C-11a
Barton	1-7, 9, 21, and 22	C-12a
Somerville	1-7, 9, 13, 21, and 22	C-13a
Leung	1-7, 9, 12, 13, 21, and 22	C-14a
Nikkarinen	1-7, 9, 12, 13, 21, and 22	C-18a

Exhibits C1-C14 and C18 include claim charts that identify where specifically in each alleged item of prior art each limitation of each asserted claim is found.

2.   Obviousness Prior Art Under 35 U.S.C. § 103

The following references alone and/or in combination render obvious one or more of asserted claims 1-7, 9, 12, 13, 21, and 22 of the '678 patent:

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Reference or Combination of Prior Art References That Renders Asserted Claims of '678 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-1a
WTK2.1 Guide	1-7, 9, 12, 13, 21, and 22	C-1b
Binder	1-7, 9, 13, 21, and 22	C-2a
de Jode	1-7, 9, 12, 13, 21, and 22	C-3a
Flash MX Professional 2004 (2003) (system)	1-7, 9, 12, 13, 21, and 22	C-4a
Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, 13, 21, and 22	C-4b
Flash MX Professional 2004 (2004) (system)	1-7, 9, 12, 13, 21, and 22	C-4c
Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, 13, 21, and 22	C-4d
BlackBerry Simulator	1-7, 9, 12, 13, 21, and 22	C-5a
Dev Environment Dev. Guide	1-7, 9, 21, and 22	C-5b
Professional BlackBerry	1-7, 9, 13, 21, and 22	C-5e
Development Environment Version 4.0	1-7, 9, 12, 21, and 22	C-5f
BlackBerry System	1-7, 9, 12, 13, 21, and 22	C-5h
Palm System	1-7, 9, 12, 13, 21, and 22	C-6a
Palm Documents	1-7, 9, 12, 13, 21, and 22	C-6b
Development Tools Guide	1-7, 9, and 21	C-6c
Using the Palm Emulator	1-7, 9, 21, and 22	C-6d
Cignetti	1, 21, and 22	C-6e
Palm OS Programming	1-7, 9, 12, 13, 21, and 22	C-6f
BREW Documents	1-7, 9, 12, 13, 21, and 22	C-7a
Nahata	1-7, 9, 12, 13, 21, and 22	C-7c
Rischpater	1-7, 9, 12, 13, 21, and 22	C-7e
Starting with BREW	1-7, 9, 12, 13, 21, and 22	C-7g
LoadRunner system	1-7, 9, 12, 13, 21, and 22	C-8a

Reference or Combination of Prior Art References That Renders Asserted Claims of '678 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
LoadRunner documents	1-7, 9, 12, 13, 21, and 22	C-8b
GATE II / MATE documents	1-7, 9, 12, 13, 21, and 22	C-9a
Milroy	1-7, 9, 12, 13, 21, and 22	C-10a
El Husseini	1-7, 9, 12, 13, 21, and 22	C-11a
Barton	1-7, 9, 21, and 22	C-12a
Somerville	1-7, 9, 13, 21, and 22	C-13a
Leung	1-7, 9, 12, 13, 21, and 22	C-14a
Nikkarinen	1-7, 9, 12, 13, 21, and 22	C-18a
WTK 2.1 and Binder	1-7, 9, 12, 13, 21, and 22	C-1c
WTK 2.1 and Platform Programming	1-7, 9, 12, 13, 21, and 22	C-1d
WTK 2.1 and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-1e
WTK 2.1, Mastering JBuilder and Feature Matrix	1-7, 9, 12, 13, 21, and 22	C-1f
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, 13, 21, and 22	C-1g
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, 13, 21, and 22	C-1h
de Jode and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-3b
de Jode and Noble	1-7, 9, 12, 13, 21, and 22	C-3c
de Jode, Noble, and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-3d
de Jode and WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-3e
de Jode, WTK 2.1, and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-3f
de Jode, WTK 2.1, and Noble	1-7, 9, 12, 13, 21, and 22	C-3g
de Jode, WTK 2.1, Noble and JBuilder	1-7, 9, 12, 13, 21, and 22	C-3h
de Jode and Nikkarinen	1-7, 9, 12, 13, 21, and 22	C-3j
de Jode, Nikkarinen, and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-3k
de Jode, Nikkarinen, and WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-3m

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Reference or Combination of Prior Art References That Renders Asserted Claims of '678 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
de Jode, Nikkarinen, WTK 2.1 and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-3n
de Jode and Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, 13, 21, and 22	C-3o
de Jode and Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, 13, 21, and 22	C-3p
Flash MX Professional 2004 printed publication reference (2004) and Nikkarinen	1-7, 9, 12, 13, 21, and 22	C-4e
Flash MX Professional 2004 printed publication reference (2004), Nikkarinen, and El Husseini	1-7, 9, 12, 13, 21, and 22	C-4f
Flash MX Professional 2004 printed publication reference (2003) and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-4g
Flash MX Professional 2004 printed publication reference (2004) and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-4h
BlackBerry Simulator and Dev. Environment Dev. Guide	1-7, 9, 12, 13, 21, and 22	C-5c
BlackBerry Simulator, Dev. Environment Dev. Guide, and Dev. Environment Dev. Guide 2	1-7, 9, 12, 13, 21, and 22	C-5d
Development Environment Version 4.0 and Professional BlackBerry	1-7, 9, 12, 13, 21, and 22	C-5g
Blackberry System and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-5j
Palm System and Palm Documents	1-7, 9, 12, 13, 21, and 22	C-6h
Palm Documents and Flash MX Professional 2004 printed publication reference (2003)	1-7, 9, 12, 13, 21, and 22	C-6i
Palm Documents and Flash MX Professional 2004 printed publication reference (2004)	1-7, 9, 12, 13, 21, and 22	C-6j
Palm System, Palm Documents, and Mastering JBuilder	1-7, 9, 12, 13, 21, and 22	C-6k
BREW Documents and WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-7b
Nahata and WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-7d
Rischpater and WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-7f

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Reference or Combination of Prior Art References That Renders Asserted Claims of '678 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Starting with BREW and WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-7h
LoadRunner documents and Milroy	1-7, 9, 12, 13, 21, and 22	C-8c
LoadRunner documents and WTK 2.1	1-7, 9, 12, 13, 21, and 22	C-8d
LoadRunner documents and El Husseini	1-7, 9, 12, 13, 21, and 22	C-8e
Obviousness-Type Double Patenting over '192 Patent in view of Gray	1-7, 9, 12, 13, 21, and 22	C-15a
Obviousness-Type Double Patenting over '192 Patent in view of El Husseini	1-7, 9, 12, 13, 21, and 22	C-15b
Obviousness-Type Double Patenting over '192 Patent in view of Bagrodia	1-7, 9, 12, 13, 21, and 22	C-15c
Obviousness-Type Double Patenting over '192 Patent in view of Cooper	1-7, 9, 12, 13, 21, and 22	C-15d
Obviousness-Type Double Patenting over '192 Patent in view of Liu	1-7, 9, 12, 13, 21, and 22	C-15e

The above table represents different references and combinations of prior art references that either individually or in combination disclose each element of the asserted claims of the '678 patent and renders those claims obvious. Exhibits C1-C15 and C18 include claim charts that identify where specifically in each alleged combinations of prior art each limitation of each asserted claim is found, as well as identifying motivations to combine multiple prior art references.

D.   The '811 Patent

1.   Anticipatory Art Under 35 U.S.C. § 102

The following references anticipate asserted claims 1, 2, 4, 5, 8, 9, 22, 24, and 26 of the '811 patent:

Reference that Anticipates Asserted Claims of '811 Patent Under Section 102	Claims Anticipated	Exhibit No.
WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1a

Reference that Anticipates Asserted Claims of '811 Patent Under Section 102	Claims Anticipated	Exhibit No.
WTK 2.1 Guide	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1b
Binder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-2a
de Jode	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3a
Flash MX Professional 2004 (2003) (system)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4a
Flash MX Professional 2004 printed publication reference (2003)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4b
Flash MX Professional 2004 (2004) (system)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4c
Flash MX Professional 2004 printed publication reference (2004)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4d
BlackBerry Simulator	1, 4, 5, 8, 9, 24, 26	D-5a
Dev Environment Dev. Guide	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5b
Professional BlackBerry	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5e
Development Environment Version 4.0	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5f
BlackBerry System	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5h
Palm System	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6a
Palm Documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6b
Development Tools Guide	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6c
Using the Palm Emulator	1, 4, 5, 8, 9	D-6d
Cignetti	1, 4, 5, 9	D-6e
Palm OS Programming	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6f
BREW Documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7a
Nahata	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7c
Rischpater	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7e
Starting with BREW	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7g
LoadRunner system	1, 2, 4, 5, 8, 9, 22, 24, 26	D-8a
LoadRunner documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-8b
GATE II / MATE documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-9a

Reference that Anticipates Asserted Claims of '811 Patent Under Section 102	Claims Anticipated	Exhibit No.
Milroy	1, 2, 4, 5, 8, 9, 22, 24, 26	D-10a
Barton	1, 2, 4, 5, 8, 9, 22, 24, 26	D-12a
Somerville	1, 2, 4, 5, 8, 9, 22, 24, 26	D-13a
Nikkarinen	1, 2, 4, 5, 8, 9, 22, 24, 26	D-18a

Exhibits D1-D13 and D18 include claim charts that identify where specifically in each alleged item of prior art each limitation of each asserted claim is found.

2. Obviousness Prior Art Under 35 U.S.C. § 103

The following references alone and/or in combination render obvious one or more of asserted claims 1, 2, 4, 5, 8, 9, 22, 24, and 26 of the '811 patent:

Reference or Combination of Prior Art References That Renders Asserted Claims of '811 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1a
WTK 2.1 Guide	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1b
Binder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-2a
de Jode	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3a
Flash MX Professional 2004 (2003) (system)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4a
Flash MX Professional 2004 printed publication reference (2003)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4b
Flash MX Professional 2004 (2004) (system)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4c
Flash MX Professional 2004 printed publication reference (2004)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4d
BlackBerry Simulator	1, 4, 5, 8, 9, 24, 26	D-5a
Dev Environment Dev. Guide	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5b
Professional BlackBerry	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5e
Development Environment Version 4.0	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5f

Reference or Combination of Prior Art References That Renders Asserted Claims of '811 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
BlackBerry System	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5h
Palm System	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6a
Palm Documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6b
Development Tools Guide	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6c
Using the Palm Emulator	1, 4, 5, 8, 9	D-6d
Cignetti	1, 4, 5, 9	D-6e
Palm OS Programming	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6f
BREW Documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7a
Nahata	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7c
Rischpater	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7e
Starting with BREW	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7g
LoadRunner system	1, 2, 4, 5, 8, 9, 22, 24, 26	D-8a
LoadRunner documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-8b
GATE II / MATE documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-9a
Milroy	1, 2, 4, 5, 8, 9, 22, 24, 26	D-10a
Barton	1, 2, 4, 5, 8, 9, 22, 24, 26	D-12a
Somerville	1, 2, 4, 5, 8, 9, 22, 24, 26	D-13a
Nikkarinen	1, 2, 4, 5, 8, 9, 22, 24, 26	D-18a
WTK 2.1 and Binder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1c
WTK 2.1 and Platform Programming	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1d
WTK 2.1 and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1e
WTK 2.1, Mastering JBuilder and Feature Matrix	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1f
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2003)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1g
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2004)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-1h

Reference or Combination of Prior Art References That Renders Asserted Claims of '811 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
de Jode and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3b
de Jode and Noble	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3c
de Jode, Noble, and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3d
de Jode and WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3e
de Jode, WTK 2.1, and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3f
de Jode, WTK 2.1, and Moble	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3g
de Jode, WTK 2.1, Noble and JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3h
de Jode and Nikkarinen	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3j
de Jode, Nikkarinen, and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3k
de Jode, Nikkarinen, and WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3m
de Jode, Nikkarinen, WTK 2.1 and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3n
de Jode and Flash MX Professional 2004 printed publication reference (2003)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3o
de Jode and Flash MX Professional 2004 printed publication reference (2004)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-3p
Flash MX Professional 2004 printed publication reference (2004) and Nikkarinen	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4e
Flash MX Professional 2004 printed publication reference (2004), Nikkarinen, and Series 60 2nd Edition SDK	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4f
Flash MX Professional 2004 printed publication reference (2003) and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4g
Flash MX Professional 2004 printed publication reference (2004) and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-4h
BlackBerry Simulator and Dev. Environment Dev. Guide	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5c
BlackBerry Simulator, Dev. Environment Dev. Guide, and Dev. Environment Dev. Guide 2	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5d

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Reference or Combination of Prior Art References That Renders Asserted Claims of '811 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Development Environment Version 4.0 and Professional BlackBerry	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5g
Blackberry System and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-5j
Palm System and Palm Documents	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6h
Palm Documents and Flash MX Professional 2004 printed publication reference (2003)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6i
Palm Documents and Flash MX Professional 2004 printed publication reference (2004)	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6j
Palm System, Palm Documents, and Mastering JBuilder	1, 2, 4, 5, 8, 9, 22, 24, 26	D-6k
BREW Documents and WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7b
Nahata and WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7d
Rischpater and WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7f
Starting with BREW and WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-7h
LoadRunner documents and Milroy	1, 2, 4, 5, 8, 9, 22, 24, 26	D-8c
LoadRunner documents and WTK 2.1	1, 2, 4, 5, 8, 9, 22, 24, 26	D-8d

The above table represents different references and combinations of prior art references that either individually or in combination disclose each element of the asserted claims of the '811 patent and renders those claims obvious. Exhibits D1-D13 and D18 include claim charts that identify where specifically in each alleged combinations of prior art each limitation of each asserted claim is found, as well as identifying motivations to combine multiple prior art references.

E.   The '579 Patent

1.   Anticipatory Art Under 35 U.S.C. § 102

The following references anticipate one or more of asserted claims 15-20, 25-29, 33, and 34 of the '579 patent:

Reference that Anticipates Asserted Claims of '579 Patent Under Section 102	Claims Anticipated	Exhibit No.
WTK 2.1	17-19, 25-29, and 34	E-1a
WTK2.1 Guide	15-20, 25-29, 33, and 34	E-1b
Binder	15, 16, 17, 18-20, 26, 29, 33, and 34	E-2a
de Jode	15-20, 25-29, 33, and 34	E-3a
Flash MX Professional 2004 (2003) (system)	15-20, 25-29, 33, and 34	E-4a
Flash MX Professional 2004 printed publication reference (2003)	15-20, 25-29, 33, and 34	E-4b
Flash MX Professional 2004 (2004) (system)	15-20, 25-29, 33, and 34	E-4c
Flash MX Professional 2004 printed publication reference (2004)	15-20, 25-29, 33, and 34	E-4d
BlackBerry Simulator	15-20, 25-29, 33, and 34	E-5a
Dev Environment Dev. Guide	15-20, 25-29, 33, and 34	E-5b
Professional BlackBerry	15-20, 25-29, 33, and 34	E-5e
Development Environment Version 4.0	15-20, 25-29, 33, and 34	E-5f
BlackBerry System	15-20, 25-29, 33, and 34	E-5h
Palm System	15-20, 25-29, 33, and 34	E-6a
Palm Documents	15-20, 25-29, 33, and 34	E-6b
Development Tools Guide	15-20, 25-29, 33, and 34	E-6c
Using the Palm Emulator	15-17, 19, 20, 25-27, 29	E-6d
Cignetti	15-17, 25-29	E-6e
Palm OS Programming	15-20, 26-29, 33, and 34	E-6f
BREW Documents	15-20, 25-29, 33, and 34	E-7a
Nahata	15-20, 25-29, 33, and 34	E-7c
Rischpater	15-20, 25-29, 33, and 34	E-7e
Starting with BREW	15-20, 25-29, 33, and 34	E-7g
LoadRunner system	15-20, 25-29, 33, and 34	E-8a

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Reference that Anticipates Asserted Claims of '579 Patent Under Section 102	Claims Anticipated	Exhibit No.
LoadRunner documents	15-20, 25-29, 33, and 34	E-8b
GATE II / MATE documents	15-20, 25-29, 33, and 34	E-9a
Milroy	15-20, 25-29, 33, and 34	E-10a
Barton	15-20, 25-29, 33, and 34	E-12a
Somerville	15-20, 25-29, 33, and 34	E-13a
Nikkarinen	15-20, 25-29, 33, and 34	E-18a

Exhibits E1-E13 and E18 include claim charts that identify where specifically in each alleged item of prior art each limitation of each asserted claim is found.

2.   Obviousness Prior Art Under 35 U.S.C. § 103

The following references alone and/or in combination render obvious one or more of asserted claims 15-20, 25-29, 33, and 34 of the '579 patent:

Reference or Combination of Prior Art References That Renders Asserted Claims Of '579 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
WTK 2.1	17-19, 25-29, and 34	E-1a
WTK 2.1 Guide	15-20, 25-29, 33, and 34	E-1b
Binder	15, 16, 17, 18-20, 26, 29, 33, and 34	E-2a
de Jode	15-20, 25-29, 33, and 34	E-3a
Flash MX Professional 2004 (2003) (system)	15-20, 25-29, 33, and 34	E-4a
Flash MX Professional 2004 printed publication reference (2003)	15-20, 25-29, 33, and 34	E-4b
Flash MX Professional 2004 (2004) (system)	15-20, 25-29, 33, and 34	E-4c
Flash MX Professional 2004 printed publication reference (2004)	15-20, 25-29, 33, and 34	E-4d
BlackBerry Simulator	15-20, 25-29, 33, and 34	E-5a
Dev Environment Dev. Guide	15-20, 25-29, 33, and 34	E-5b

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Reference or Combination of Prior Art References That Renders Asserted Claims Of '579 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
Professional BlackBerry	15-20, 25-29, 33, and 34	E-5e
Development Environment Version 4.0	15-20, 25-29, 33, and 34	E-5f
BlackBerry System	15-20, 25-29, 33, and 34	E-5h
Palm System	15-20, 25-29, 33, and 34	E-6a
Palm Documents	15-20, 25-29, 33, and 34	E-6b
Development Tools Guide	15-20, 25-29, 33, and 34	E-6c
Using the Palm Emulator	15-17, 19, 20, 25-27, 29	E-6d
Cignetti	15-17, 25-29	E-6e
Palm OS Programming	15-20, 26-29, 33, and 34	E-6f
BREW Documents	15-20, 25-29, 33, and 34	E-7a
Nahata	15-20, 25-29, 33, and 34	E-7c
Rischpater	15-20, 25-29, 33, and 34	E-7e
Starting with BREW	15-20, 25-29, 33, and 34	E-7g
LoadRunner system	15-20, 25-29, 33, and 34	E-8a
LoadRunner documents	15-20, 25-29, 33, and 34	E-8b
GATE II / MATE documents	15-20, 25-29, 33, and 34	E-9a
Milroy	15-20, 25-29, 33, and 34	E-10a
Barton	15-20, 25-29, 33, and 34	E-12a
Somerville	15-20, 25-29, 33, and 34	E-13a
Nikkarinen	15-20, 25-29, 33, and 34	E-18a
WTK 2.1 and Binder	15-20, 25-29, 33, and 34	E-1c
WTK 2.1 and Platform Programming	15-20, 25-29, 33, and 34	E-1d
WTK 2.1 and Mastering JBuilder	15-20, 25-29, 33, and 34	E-1e
WTK 2.1, Mastering JBuilder and Feature Matrix	15-20, 25-29, 33, and 34	E-1f

Reference or Combination of Prior Art References That Renders Asserted Claims Of '579 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2003)	15-20, 25-29, 33, and 34	E-1g
WTK 2.1 and Flash MX Professional 2004 printed publication reference (2004)	15-20, 25-29, 33, and 34	E-1h
de Jode and Mastering JBuilder	15-20, 25-29, 33, and 34	E-3b
de Jode and Noble	15-20, 25-29, 33, and 34	E-3c
de Jode, Noble, and Mastering JBuilder	15-20, 25-29, 33, and 34	E-3d
de Jode and WTK 2.1	15-20, 25-29, 33, and 34	E-3e
de Jode, WTK 2.1, and Mastering JBuilder	15-20, 25-29, 33, and 34	E-3f
de Jode, WTK 2.1, and Moble	15-20, 25-29, 33, and 34	E-3g
de Jode, WTK 2.1, Noble and JBuilder	15-20, 25-29, 33, and 34	E-3h
de Jode and Nikkarinen	15-20, 25-29, 33, and 34	E-3j
de Jode, Nikkarinen, and Mastering JBuilder	15-20, 25-29, 33, and 34	E-3k
de Jode, Nikkarinen, and WTK 2.1	15-20, 25-29, 33, and 34	E-3m
de Jode, Nikkarinen, WTK 2.1 and Mastering JBuilder	15-20, 25-29, 33, and 34	E-3n
de Jode and Flash MX Professional 2004 printed publication reference (2003)	15-20, 25-29, 33, and 34	E-3o
de Jode and Flash MX Professional 2004 printed publication reference (2004)	15-20, 25-29, 33, and 34	E-3p
Flash MX Professional 2004 printed publication reference (2004) and Nikkarinen	15-20, 25-29, 33, and 34	E-4e
Flash MX Professional 2004 printed publication reference (2004), Nikkarinen, and El Husseini	15-20, 25-29, 33, and 34	E-4f
Flash MX Professional 2004 printed publication reference (2003) and Mastering JBuilder	15-20, 25-29, 33, and 34	E-4g
Flash MX Professional 2004 printed publication reference (2004) and Mastering JBuilder	15-20, 25-29, 33, and 34	E-4h
BlackBerry Simulator and Dev. Environment Dev. Guide	15-20, 25-29, 33, and 34	E-5c

Reference or Combination of Prior Art References That Renders Asserted Claims Of '579 Patent Obvious Under Section 103	Claims Rendered Obvious	Exhibit No.
BlackBerry Simulator, Dev. Environment Dev. Guide, and Dev. Environment Dev. Guide 2	15-20, 25-29, 33, and 34	E-5d
Development Environment Version 4.0 and Professional BlackBerry	15-20, 25-29, 33, and 34	E-5g
BlackBerry System and Mastering JBuilder	15-20, 25-29, 33, and 34	E-5j
Palm System and Palm Documents	15-20, 25-29, 33, and 34	E-6h
Palm Documents and Flash MX Professional 2004 printed publication reference (2003)	15-20, 25-29, 33, and 34	E-6i
Palm Documents and Flash MX Professional 2004 printed publication reference (2004)	15-20, 25-29, 33, and 34	E-6j
Palm System, Palm Documents, and Mastering JBuilder	15-20, 25-29, 33, and 34	E-6k
BREW Documents and WTK 2.1	15-20, 25-29, 33, and 34	E-7b
Nahata and WTK 2.1	15-20, 25-29, 33, and 34	E-7d
Rischpater and WTK 2.1	15-20, 25-29, 33, and 34	E-7f
Starting with BREW and WTK 2.1	15-20, 25-29, 33, and 34	E-7h
LoadRunner documents and Milroy	15-20, 25-29, 33, and 34	E-8c
LoadRunner documents and WTK 2.1	15-20, 25-29, 33, and 34	E-8d
LoadRunner documents and El Husseini	15-20, 25-29, 33, and 34	E-8e

The above table represents different references and combinations of prior art references that either individually or in combination disclose each element of the asserted claims of the '579 patent and renders those claims obvious. Exhibits E1-E13 and E18 include claim charts that identify where specifically in each alleged combinations of prior art each limitation of each asserted claim is found, as well as identifying motivations to combine multiple prior art references.

IV.   RESPONSE TO PLAINTIFFS' P.R. 3-1(E) STATEMENT REGARDING PRIORITY DATES

The Asserted Claims are not entitled to certain priority dates as asserted by Plaintiffs in their Infringement Contentions. While the discussion in this section supports JPMC's contentions that the Asserted Claims are not entitled to the priority dates of several earlier applications, it does not mean that JPMC agrees that the Asserted Claims are entitled to priority dates of any later applications. JPMC reserves the right to argue that the Asserted Claims have no written description or enablement support in any application.

JPMC contends that the references and combinations of references cited in these invalidity contentions either anticipate the Asserted Claims or render them obvious. These contentions are supported by the invalidity chart exhibits referenced and produced, and the applicable effective dates of the Asserted Patents. The patentee has not adduced evidence to meet its burden to show that the cited references are not statutory prior art.

A.   Asserted Claims Are Not Entitled to Priority Dates of Provisional Applications

Patents have no presumptive entitlement to priority date of their provisional applications. JPMC contends that none of the Asserted Claims is entitled to priority dates of the provisional applications of the Asserted Patents.

1.   The '101 Provisional Application

Each of the Asserted Patents claims priority to the same Provisional Application No. 60/689,101, filed June 10, 2005 ("the '101 Provisional Application"). However, none of the Asserted Claims of the Asserted Patents is entitled to the priority date of the '101 Provisional Application. The '101 Provisional Application is a marketing brochure intended for investors, seeking Series A funding for bringing certain "Active2Play" products to market. The brochure gives no indication that any of these products is functional. Rather, each of the products is claimed

to be "deployable within [X] months of funding." The brochure references only "a prototype 'blueprint' and application layout of a next generation Flash Lite authoring environment." It has little technical substance and provides no indication that the applicant had an understanding of the challenges in building these products. JPMC contends that the '101 Provisional Application does not disclose the inventions claimed in the later-filed applications sufficient to satisfy the written description and enablement requirements of 35 U.S.C. § 112. Therefore, none of the Asserted Claims of the Asserted Patents is entitled to the priority date of the '101 Provisional Application.

2.   The '934 Provisional Application

The '864 Patent and the '579 Patent additionally claim priority to Provisional Application No. 61/152,934, filed February 16, 2009 ("the '934 Provisional Application"). However, none of the Asserted Claims of the '864 Patent and the '579 Patent is entitled to the priority date of the '934 Provisional Application.

U.S. Patent Application No. 12/705,913, filed on February 15, 2010 ("the '913 Application") claims priority to the '934 Provisional Application. The '913 Application includes substantial subject matter that was not part of the '934 Provisional Application. JPMC contends that the '934 Provisional Application does not disclose the invention claimed in the later-filed applications sufficient to satisfy the written description and enablement requirements of 35 U.S.C. § 112. Therefore, none of the Asserted Claims of the '864 Patent and the '579 Patent is entitled to the priority date of the '934 Provisional Application.

B.   The Asserted Claims of the '864 and '579 Patents Are Not Entitled to the Priority Date of The Application to Which They Are CIPs

The '864 Patent and the '579 Patent also claim priority to U.S. Patent Application No. 12/705,913, filed on February 15, 2010 ("the '913 Application"). The '913 Application is a continuation-in-part ("CIP") of U.S. Patent Application No. 11/449,958, filed on June 9, 2006

("the '958 Application").   Being a CIP means that additional subject matter was added to the specification of the '913 Application that was not disclosed in the '958 Application.   JPMC contends that the '958 Application does not disclose the inventions claimed in the Asserted Claims of the '864 Patent and the '579 Patent sufficient to satisfy the written description and enablement requirements of 35 U.S.C. § 112.   Therefore, none of the Asserted Claims of the '864 Patent and the '579 Patent is entitled to the priority date of the '958 Application.

C.   **Priority Dates of the Asserted Claims**

1.   **The '192 Patent**

JPMC contends that claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 Patent are only entitled to the priority date of June 9, 2006 – the filing date of the '958 Application.

Claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 Patent recite multiple terms and limitations that do not have written description or enablement support in the '101 Provisional Application. Significant portions of the specification of the '192 Patent were first recited only in the '958 Application.   Such portions include at least the following: Figures 1-2, 6-8, 13-14; sections at 4:53-14:49.

For example, claim 1 of the '192 Patent recites "plurality of network characteristics indicative of performance of the mobile device when executing the application; wherein the software authoring interface is further configured to simulate a network connection state encountered by the mobile device," which is not disclosed in the '101 Provisional Application. Claims 2-7, 9, 12, and 13 depend on claim 1.   As another example, claim 60 recites "indicative of performance of the mobile device when executing the application," which is not disclosed in any priority application before the '101 Provisional Application.   Claims 61-62 and 65 depend on claim 60.   The '101 Provisional Application does not disclose "simultaneously" or a "plurality" of characteristics.

Therefore, no Asserted Claim of the '192 Patent is entitled to any priority date before June 9, 2006 – the filing date of the '958 Application.

2.   The '864 Patent

JPMC contends that claims 1, 8, 13, 14, and 17 of the '864 Patent are only entitled to the priority date of February 15, 2010 – the filing date of the '913 Application.

Claims 1, 8, 13, 14, and 17 of the '864 Patent recite multiple terms and limitations that do not have written description or enablement support in the '958 Application, or in the '934 Provisional Application, or in the '101 Provisional Application. Significant portions of the specification of the '864 Patent were first recited only in the '913 Application. Such portions include at least the following: Figures 21-26; sections at 3:52-65, 4:12-27, 6:38-41, 8:10-14, 8:52-56, 15:39-16:35, 16:43-46, 17:39-51, 18:40-41, 19:28-40, 20:16-18, 20:33-23:8.

For example, claim 1 of the '864 Patent recites "a profile window," which is not disclosed in any priority application before the '913 Application. Additionally, claim 1 of the '864 Patent recites "a plurality of network characteristics indicative of performance of the mobile device when executing the application; wherein the network characteristics are based on data of interaction with networks in non-simulated environments," which is not disclosed in the '101 Provisional Application. Claims 8, 13, 14, and 17 depend on claim 1. As another example, claim 13 recites "the software is further configured to display data graphically which is configured to enable a user to identify either application performance, or network performance, or both," which is not disclosed in any priority application before the '913 Application.

Therefore, no Asserted Claim of the '864 Patent is entitled to any priority date before February 15, 2010 – the filing date of the '913 Application.

3.   The '678 Patent

JPMC contends that claims 1-7, 9, 12, 13, 21, and 22 of the '678 Patent are only entitled to

the priority date of June 9, 2006 – the filing date of the '958 Application.

Claims 1-7, 9, 12, 13, 21, and 22 of the '678 Patent recite multiple terms and limitations

that do not have written description or enablement support in the '101 Provisional Application.

Significant portions of the specification of the '678 Patent were first recited only in the '958

Application. Such portions include at least the following: Figures 1-2, 6-8, 13-14; sections at 5:1-

15:13.

For example, claim 1 of the '678 Patent recites "a plurality of operator network

characteristics including at least bandwidth availability indicative of performance of the mobile

device when executing the application; wherein the bandwidth availability is based at least in part

on bandwidth data predetermined from interactions between one or more mobile devices and at

least one operator network," which is not disclosed in the '101 Provisional Application. Claims

2-7, 9, 12, 13, 21, and 22 depend on claim 1. The '101 Provisional Application does not disclose

"network performance" or "real-world mobile network profiles."

Therefore, no Asserted Claim of the '678 Patent is entitled to any priority date before June

9, 2006 – the filing date of the '958 Application.

4.   The '811 Patent

JPMC contends that claims 1, 2, 4, 5, 8, 9, 22, 24, and 26 of the '811 Patent are only entitled

to the priority date of June 9, 2006 – the filing date of the '958 Application.

Claims 1, 2, 4, 5, 8, 9, 22, 24, and 26 of the '811 Patent recite multiple terms and limitations

that do not have written description or enablement support in the '101 Provisional Application.

Significant portions of the specification of the '811 Patent were first recited only in the '958

Application. Such portions include at least the following: Figures 1-2, 6-8, 13-14; sections at 5:1-15:12.

For example, claim 1 of the '811 Patent recites "a mobile device," "simulate at least one of the one or more characteristics indicative of the mobile device corresponding to the selected mobile device model," "plurality of resources," and "correspond the utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization," which are not disclosed in the '101 Provisional Application. Claims 2, 4, 5, 8, and 9 depend on claim 1. As another example, claim 22 of the '811 Patent recites "a mobile device," "simulate one or more characteristics indicative of the mobile device," and "resource utilization," which are not disclosed in the '101 Provisional Application. Claims 24 and 26 depend on claim 22. The '101 Provisional Application does not disclose a (physically present) "mobile device" and teaches away from it.   The '101 Provisional Application does not disclose any network characteristics.

Therefore, no Asserted Claim of the '811 Patent is entitled to any priority date before June 9, 2006 – the filing date of the '958 Application.

5.   The '579 Patent

JPMC contends that claims 15-20, 25-29, 33, and 34 of the '579 Patent are only entitled to the priority date of February 15, 2010 – the filing date of the '913 Application.

Claims 15-20, 25-29, 33, and 34 of the '579 Patent recite multiple terms and limitations that do not have written description or enablement support in the '958 Application, or in the '934 Provisional Application, or in the '101 Provisional Application. Significant portions of the specification of the '864 Patent were first recited only in the '913 Application. Such portions include at least the following: Figures 21-26; sections at 3:60-4:9, 4:23-38, 6:50-53, 8:28-32, 8:42-44, 9:3-7, 16:1-67, 17:8-11, 18:7-19, 19:65-20:17, 20:54-57, 21:3-23:49.

For example, claim 15 of the '579 Patent recites "correspond the utilization of a specific displayed resource at a given time with one or more functions, or code, or both of the application responsible for that utilization," which is not disclosed in any priority application before the '913 Application. Claims 16-20, 25-29, 33, and 34 depend on claim 15. As another example, claim 17 recites "the software instructions include identifying one or more areas of code, or functions, or both of the application responsible for utilization of a specific displayed resource at a given time," which is not disclosed in any priority application before the '913 Application.

Therefore, no Asserted Claim of the '579 Patent is entitled to any priority date before February 15, 2010 – the filing date of the '913 Application.

V.   INVALIDITY DUE TO CLAIMED SUBJECT MATTER BEING PATENT INELIGIBLE

All of the Asserted Claims are invalid for claiming subject matter that is patent ineligible under 35 U.S.C. § 101. 35 U.S.C. § 101 provides that "[w]hoever invents or discovers any new and useful process, machine manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. Section 101, however, also contains exceptions: "[l]aws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 573 U.S. 208, 216 (2014 (citations omitted).

The Supreme Court has enumerated a two-step test, known as the *Alice* test, for deciding whether a patent claims patent-ineligible subject matter. *Alice Corp.*, 573 U.S., at 217-218. Step 1 of *Alice* requires the Court to review whether a claim is directed to a patent-ineligible concept like an abstract idea. *Id.,* at 217. If the answer is no, the inquiry ends and the claim is patentable over 35 U.S.C. § 101. But if the answer is yes, then the Court proceeds to step 2. Step 2 of *Alice* requires the Court to review whether the claim recites elements sufficient to transform it to a

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patent-eligible application. *Id.,* at 217-18. If the answer at step 2 is no, the claim is not patentable

under 35 U.S.C. § 101. Eligibility is ultimately a "question of law which may contain underlying

facts." *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018).

> **a)**   *Alice Step* **1: The Asserted Claims as a whole are directed to patent ineligible subject matter because they use functional language to recite the abstract idea of emulation/simulation**

The focus of the Asserted Claims relates to emulating" hardware characteristics, and

"simulating" network characteristics as part of mobile application development. The preamble of

Asserted Claim 1 of the '192 Patent recites a "system for developing an application for a mobile

device." It goes on to claim a "software authoring interface" that is "configured to" (1) emulate

[simulate] a plurality of network characteristics via profile display windows, (2) simulate a

network connection state.

The Asserted Claims of the '864 and '678 Patents are directed to a system for testing an

application for a mobile device comprising software/a software testing interface configure to

simulate. '864 Patent, claim 1 ("A system for testing an application for a mobile device

comprising: software configured to simulate, via one or more profile display windows."); '678

Patent, claim 45 ("A system for testing an application for a mobile device comprising: a software

testing interface configured to simultaneously visually simulate").

The asserted independent claims of the '579 and '811 Patents are directed to a "[a] non-

transitory, computer readable medium comprising software instructions for developing an

application to be run on a mobile device, wherein the software instructions, when executed, cause

a computer to" perform certain tasks as part of simulating/emulating a mobile application.[2] While,

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[2] Claim 9 of the '811 Patent recites "model[ing]" one or more characteristics indicative of the targeted mobile device. '811 Patent, at claim 9. As described in the Asserted Patents, "[e]mulator 101 generates a mobile device model 102, based upon characteristics 115 of mobile device 113.

the '811 Patent and '579 Patent describe other items that the software instructions, when executed, perform, the focus of these claims as a whole relates to the emulation of the mobile device's hardware characteristics, and the simulation of the network characteristics.

The Asserted Claims are directed to emulating mobile device characteristics and simulating network characteristics during mobile application development. The emulation/simulation in the Asserted Claims, however, is no more than aggregating conventional computer processes to create a display or identification of a result. The Asserted Claims do not claim a specific improvement in computer capabilities. Because the claims do not include a specific improvement in computer technology, they do no more than functionally claim a result without a specific way to achieve the result. For example, a limitation in claim 1 of the '811 Patent is "simulate at least one of the one or more characteristics indicative of the mobile device corresponding to the selected mobile device model can operate," but this does not give a person of skill in the art any indication of how to perform the simulation. *See also* '579 Patent, at claim 15 ("monitor utilization of one or more resources of the mobile device over time by an application running on a simulation of the mobile device"). The other simulation/emulation limitations similarly functionally claim a result without a specific way to achieve the result.

The Asserted Claims claim no more than the desired result or function of displaying information to the user with a conventional computer. For example, the claims recite simulating via a profile display window. '192 Patent, at claim 1.

These are exactly the types of claims that Courts have found to be abstract. *See, e.g., Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1354 (Fed. Cir. 2016) (collecting cases) (steps of

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Model 102 emulates mobile device 114." '192 Patent, 4:57-59. Thus, the model of claim 9 necessarily requires emulation.

obtaining, manipulating, and displaying data, particularly when claimed at a high level of generality, are abstract concepts); *Hawk Tech. Sys. LLC v. Castle Retail, LLC*, 60 F. 4th 1349 (finding that claims involving "viewing multiple simultaneously displayed and stored video images on a remote viewing device of a video surveillance system" were abstract); *AI Visualize, Inc. v. Nuance Communications, Inc.*, 97 F.4th 1371, 1378 (Fed. Cir. 2024) (finding that claims related to "converting data and using computers to collect, manipulate, and display the data" were abstract). The claims are not saved by the fact that the display is done as part of the simulation/emulation. *Simio, LLC v. FlexSim Software Products, Inc.*, 983 F.3d 1353, 1360 (stating the "the claim is directed to the abstract idea of using graphics instead of programming to create object-oriented simulations.").

Although the focus is on the claims, the claims must be "considered in light of the specification." *Hawk Tech. Sys., LLC v. Castle Retail, LLC,* 60 F.4th 1349, 1356 (Fed. Cir. 2023). The specification is similarly void of any technical description of either emulating or simulating. For example, the patents describe that "[e]mulator 101 generates a mobile device model 102, based upon characteristics 115 of mobile device 114," ('579 Patent at 4:57-59), and that "[m]odel 102 emulates mobile device 114 to play frame-based application 104 and may, for example, generate an emulated mobile device display 111 that represents mobile device 114." '579 Patent at 4:59-62. The specification describes "exemplary" hardware characteristics that may be emulated ('579 Patent at 5:55-6:13), but does not otherwise describe how the emulation actually happens or works.

The specification is similarly void of any information on how the computer "simulates" In "step 714, emulator 101 interacts with one or more operator development servers (e.g., operator development server 808, FIG. 8) to configure device model 102 for simulated network operation to allow testing of application 104 within a simulated wireless network environment (e.g., a

simulated mobile phone wireless network environment).'' '579 Patent at 0:17-23. Again, the specification describes certain network characteristics that may be simulated ('579 Patent at 12:3-11), but does not otherwise describe how the simulation actually occurs. Accordingly, to the extent emulating and simulating are supported in the specification, it is only conventional knowledge of POSITA that supports the limitation, and thus, the claims are abstract under *Alice* step 1.

Thus, nothing in the Asserted Claims as viewed in light of the specification, "calls for anything but preexisting computers and displays, programmed using techniques known to skilled artisans, to present the new arrangement of information." *Brumfield, Trustee for Ascent Trust v. IBG LLC*, 97 F.4th 854, 868 (Fed. Cir. 2024). Converting software to a visual emulation or simulation is no more a result with the conventional use of computers. Thus, the claims are abstract under *Alice* step 1.

b)   *Alice* Step 2: The claim elements do not transform the nature of the Asserted Claims into a patent-eligible application of the abstract idea

The Asserted Claims' additional limitations "do not transform the abstract idea that they recite into patent-eligible subject matter" because the claims "simply instruct the practitioner to implement the abstract idea with routine, conventional activity." *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). The claims recite the following additional limitations:

- "[S]elect one or more characteristics associated with a mobile device. '579 Patent, at claim 15;'192 Patent, at claim 2. Allowing a user to select something "is well-understood, routine, conventional activity." *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1093 (Fed. Cir. 2019).

- "[A] software testing interface configured to simultaneously visually simulate, via one or more profile display windows, a plurality of operator network characteristics

…wherein …at least one operator network and interaction with a network enables the software to import real-world mobile network profiles." '678 Patent, at claim 45.   Importing real-world mobile network profiles is routine conventional. *Ameranth, Inc. v. Domino's Pizza, LLC*, 792 Fed.Appx. 780, 788 (Fed. Cir. 2019) (non-precedential) (finding that limitation of "automatic importation of information from a database" is "routine and conventional").

- "[D]isplay a list of a plurality of mobile device models." '811 Patent, at claims 1, 9, 22; '579 Patent, at claim 15.   Displaying data to a user is routine and conventional. *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1093 (Fed. Cir. 2019) ("[R]outine data gathering, and displaying information as indicators along a scaled price axis is well-understood, routine, conventional activity that does not add something significantly more to the abstract idea).

- "[C]orrespond the utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization." '811 Patent, at claims 1, 22; '579 Patent, at claim 15.   Corresponding a displayed resource to functions of the mobile application responsible for that resource is also routine and conventional. *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1093 (Fed. Cir. 2019) (stating that "receiving market information is simply routine data gathering, and displaying information as indicators along a scaled price axis is well-understood, routine, conventional activity that does not add something significantly more to the abstract idea").

- "Initiate transmission of the application … to one or more physical versions of a mobile device." '811 Patent, at claims 2, 22; '579 Patent, at claim 15. Initiating

transmission of the application to the physical version of a mobile device is also routine and conventional. *Chamberlain Group, Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1349 (Fed. Cir. 2019) (stating that the specification made it clear that "transmitting information wirelessly was conventional").

- Initiate loading of at least one of the one or more characteristics from one of a remote server, and a computer readable media. '579 Patent, at claim 16. Initiating loading of at least one of the one or more characteristics from one of a remote server, and a computer readable media is routine and conventional. *Voit Techs, LLC v. Del-Tom, Inc.*, 757 Fed.Appx 1000, 1004 (Fed. Cir. 2019) (nonprecedential) (stating that "batch uploading" was "generic and conventional").

- Monitor utilization of a plurality of resources over time as the application is running. '811 Patent, at claim 9; *see also* '811 Patent, at claim 22; '579 Patent at claim 15. Monitoring utilization of a plurality of resources over time as the application is running is routine and conventional. *Interval Licensing LLC v. AOL, Inc.* 896 F.3d 1335, 1346 Fed. Cir. (2018) (stating, as part of *Alice* step 2 analysis, that "the claims do not recite any arguably inventive method of how the secondary information is displayed such as … how the primary activity on the screen is monitored").

- Identify one or more functions of the application responsible for utilization of a specific displayed resource at a given time. '811 Patent, at claim 9; '579 Patent, at claim 17. Identifying one or more functions of the application responsible for utilization of a specific displayed resource at a given time is routine and conventional. *Rady v. Boston Consulting Group, Inc.*, No. 2022-2218, 2024 WL

1298742, at *3 (Fed. Cir. 2024) (non-precedential) (stating that "[c]laim 1 requires identifying a physical item's unique pattern of physical imperfections, or 'signature,' and then recording that information to a blockchain if the object has not been previously registered," and noting that "[a]s we have often emphasized, however, claims directed to gathering and storing data, without more, are impermissibly abstract.")

The patents themselves, and available prior art acknowledge that each of the recited components were already well-understood, routine, or conventional. Because the Asserted Claims only use well-understood and conventional computer hardware and software to carry out the abstract idea of emulating and simulating, the claims do not recite an inventive concept.

The remaining claim limitations are wherein clauses that purport to further narrow the abstract idea. *See e.g.*, '579 patent cl. 25 ("The medium of claim 18, wherein the network characteristics are displayed using at least one of a map, dropdown list, and drop-down menu.") However, limitations like these that attempt to limit the abstract idea to a particular field of use or limitations that add post solution components "do not convert the otherwise ineligible concept into an inventive concept." *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315, 1328-29 (Fed. Cir. 2017).

Nor does the ordered combination of claim limitations transform them into substantially more than the abstract idea itself. They use a conventional ordering of steps with conventional technology. For example, claim 1 of the '811 Patent displays a list of mobile devices that the user can select, simulates characteristics of the selected mobile device, monitors resources of the mobile device, displays those resources, and corresponds the resources to a function applicable for the resources. '811 Patent, at claim 1. The other claims similarly contain conventional ordering. But

even if the claims make a particular choice among abstract ideas involving information and ordering, that does not save them. *Brumfield, Trustee for Ascent Trust v. IBG LLC*, 97 F.4th 854, 868 (Fed. Cir. 2024) And nothing in the claims of the '811 or '579 Patents, as viewed in light of the specification, "calls for anything but preexisting computers and displays, programmed using techniques known to skilled artisans, to present the new arrangement of information." *Id*.

The fact that the claims address mobile device development does not transform them either. The specification acknowledges that mobile device development was well-known. '192 Patent at 1:52-54 ("Development packages (e.g., FlashMX by Macromedia) are available to run on a PC and allow development of Flash Player applications for one or more mobile devices."). The very idea to which the asserted patents are directed—mobile application development—and the purported problems associated with it were already understood years before the asserted patents.

That the Asserted Claims use of an emulator and/or simulator do not save them either. As discussed above both emulators and simulators were well-known long before the asserted patents. *See also Elec. Power Grp.*, 830 F.3d at 1356; *BSG Tech*, 899 F.3d at 1289 ("[M]erely reciting components more specific than a generic computer does not preclude a claim from being directed to an abstract idea.").

Such claims that use "already available computers, with their already available basic functions" risk a monopoly on a concept and not a technological innovation. *SAP v. InvestPic*, 898 F.3d 1161, 1166 (Fed. Cir. 2018). This is the very class of claims § 101 was meant to exclude as claiming monopolies on concepts, not innovations. For these reasons, the Asserted Claims fail *Alice* step 2. Accordingly, all of the Asserted Claims are invalid under 35 U.S.C. § 101.

VI.   ADDITIONAL GROUNDS OF INVALIDITY

Pursuant to P.R.3-3(d), JPMC further sets forth its contentions that certain Asserted Claims are invalid under 35 U.S.C. §§ 101 and 112. In addition to the above cited references, below are additional grounds for invalidating the asserted patents:

A.   The '192 Patent

JPMC maintains that claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 Patent are invalid for failure to meet the requirements of 35 U.S.C. § 112. To the extent the following contentions reflect constructions of claim limitations consistent with or implicit in Plaintiffs' infringement contentions, no inference is intended nor should any be drawn that JPMC agrees with Plaintiffs' claim constructions.

1.   Lack of An Adequate Written Description

35 U.S.C. §112, paragraph 1, includes a written description requirement. *See* 35 U.S.C. § 112(1) ("The specification shall contain a written description of the invention . . . of the manner and process of making and using [the invention] in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same."). To satisfy the written description requirement, the specification must "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (internal citation omitted). In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. *Id.*

a)   "system for developing"

Claim 1 recites "a system for developing an application for a mobile device."   The specification of the '192 Patent, however, does not disclose a system for developing a mobile

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device application.   The specification recites a "system," but only discloses a system for "emulating and profiling a frame based application." '192 Patent, at 4:53-54. *See also*, '192 Patent, at 2:61-63 ("FIG. 1A shows one exemplary embodiment of a system for emulating, authoring, and visually profiling an application.").   The lack of disclosure for a system for *developing an application* in the specification would not allow a POSITA to recognize that the inventor invented what is claimed.

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

b)   "an application for a mobile device"

Claim 1 recites "a system for developing an application for a mobile device." There is insufficient written description to support the entire scope of the term "an application for a mobile device." While the specification uses the term "application," the presence of this generic claim language in the original disclosure does not satisfy the written description requirement because it fails to support the scope of the genus claimed. *Ariad Pharm. Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1349-50 (Fed. Cir. 2010) ("[A]n adequate written description of a claimed genus requires more than a generic statement of an invention's boundaries.") (citing *Regents of the Univ. of Cal. v. Eli Lilly*, 119 F.3d 1559, 1568 (Fed. Cir. 1997), cert. denied, 523 U.S. 1089 (1998)).

There are myriad ways to write and develop a mobile device application. Some applications, like those described by the '192 specification, but this is only a small subset of the whole world of applications for mobile devices. The claim language "an application for a mobile device" purports to cover this much broader genus including all types mobile device applications, but the specification supports only the narrower category of frame-based applications.   For example, the '192 Patent describes the operation of the profiler as follows:

> Profiler 106 monitors playing of frame based application 104 within model 102 to estimate resource usage of application 104 and generates a frame based profile data display 110. Frame based profile data display 110 may allow a user of system 100 to identify areas within application 104 that would exceed resources of mobile device 114.

'192 Patent, 4:66-5:4.

There is no indication that the inventor of the '192 Patent had possession of a system for developing applications other than frame-based applications.   And the written description requirement cannot be satisfied "merely by clearly describing one embodiment of the thing claimed." *LizardTech v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005). The '192 Patent's disclosure of profiling performance of one specific type of application does not provide adequate description for a more generic system for developing all types of applications for mobile devices.

Extrinsic evidence also supports that that the inventor of the '192 Patent did not possess a system for developing all types of applications. In communications regarding a proposed product based off of the subject matter of the '192 Patent, the inventor was questioned:

> "Lastly you focus on frames. Is that the way to think about this problem? Increasingly, through things like Flex, Flash development will move away from frames since frames are not the right level of abstraction for application development. How will MCOM work in this case?"

WAPP0010358. Rather than addressing the proposed product's ability to develop applications other than frame-based applications, the inventor responded that "remov[ing] the layered timelines and frames and you reduce Flash Lite development to the realms of Java, .NET, and BREW –

coding without a palette (it is similar to giving an artist no canvass to paint on – that is why Flash has succeeded tremendously on the entertainment side)." *Id.*

Accordingly, the broad genus of "application for a mobile device" was not in the inventor's possession at the time of invention. Instead, the specification supports only "frame-based applications." Because the specification does not support the entire scope of the this term, the claim is invalid for lack of adequate written description. Asserted claims 2-7, 9, 12, and 13 all depend from claim 1 and are also invalid for this same deficiency.

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c)   **"simultaneously visually emulate … a plurality of network characteristics"**

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The Claim 1 recites a software authoring interface that "simultaneously visually emulate[s] … a plurality of network characteristics indicative of performance of the mobile device when executing the application."

During prosecution, after a Non-Final Rejection in which the USPTO raised only double patenting rejections, Applicant filed a terminal disclaimer and added claims 44-69. '192 File History, JPMC-00141761-1771. Along with this amendment, Applicant explained that "[s]upport for the new claims can be found throughout the specification, including the figures and originally-filed claims. *See*, for example, Figures 1A, 8 to 13 and associated descriptions." *Id.* at JPMC-00141770. New claim 44 (now claim 1), as filed, read:

> "A system for developing an application for a mobile device comprising:
>
> a software authoring interface configured to simultaneously visually emulate, via one or more profile display windows, a plurality of ***hardware characteristics*** indicative of performance of the mobile device when executing the application; wherein the software authoring interface is further configured to simulate a network connection state encountered by the mobile device."

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Id. at JPMC-00141767.   The USPTO subsequently allowed these claims without further amendment. *Id.* at JPMC-00141777.

However, three months after receiving the Notice of Allowance, Applicant filed an after-final amendment under 37 C.F.R. §1.312 materially altering the scope of claim 44 (now claim 1) as follows:

> "A system for developing an application for a mobile device comprising:
>
> a software authoring interface configured to simultaneously visually emulate, via one or more profile display windows, a plurality of network ~~hardware~~ characteristics indicative of performance of the mobile device when executing the application; wherein the software authoring interface is further configured to simulate a network connection state encountered by the mobile device."

Id. at JPMC-00141790, 1797. The remarks accompanying the amendment include an explanation regarding a requested change to the title and a request for claim renumbering. *Id.* at JPMC-00141801.

Notably, these remarks fail to address the claim amendment in any way, obfuscating the true nature of the amendment. The USPTO entered the Rule 312 Amendment, but there is no indication of an updated search targeting the new claim scope. *Id.* at JPMC-00141812. In fact, the Examiner did not include an updated search notes or search strategy, despite including supplemental issue classification and index of claims forms. *Id.* at JPMC-00141814-1818.

This amendment changes the scope of the claims in a manner that is not supported in the specification. In particular, while Applicant changed "hardware characteristics" to "network characteristics," Applicant did not make a corresponding amendment to change "emulate" to "simulate" in a manner consistent with the specification. As Plaintiffs have acknowledged in prior litigation involving the '192 Patent, the specification uses the term "emulate" to refer to a mobile

device and "simulate" to refer to network characteristics. Plaintiffs even acknowledged that the failure to amend "emulate" to "simulate" was in error. *Id*.

On account of this drafting error, the claim, as amended, does not have written description support in the specification. There is no disclosure of emulating a network, or emulating any network characteristics. The '192 Patent discloses that "network characteristics may be simulated by simulator 810," separate component from emulator 101. '192 Patent at 12:3-4. In fact, it is simulator 810 that "model[s] operation of a wireless network," including network characteristics, while emulator 101 includes "model algorithms" that define the operation of a mobile device, including hardware characteristics such as processor speed, RAM size, etc. *Id*. at 11:37, 5:48-6:10. There is, however, no disclosure emulating network characteristics, by simulator 810 or otherwise. As such, a POSITA would not have understood that the inventor had possession of a system that emulates network characteristics. As a result, the specification of the '192 Patent does not sufficiently support the scope of the post-issuance amendment and claim 1 lacks sufficient written description.

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement

d)   "network characteristics indicative of performance of the mobile device when executing the application"

The discussion of the prosecution history of the '192 Patent in Section VI.A.1.c) above is hereby incorporated by reference. Claim 1 recites a software authoring interface that "simultaneously visually emulate[s] … a plurality of network characteristics indicative of performance of the mobile device when executing the application."

The specification does not sufficiently describe "network characteristics" that indicate the "performance of the mobile device when executing the application." Rather, the specification

describes the "network characteristics" as scripted events (e.g., cell tower identification, service message, bandwidth, etc.), consumer events (e.g., checking email, checking messages, browsing network, available minutes, selecting images, etc.), and incoming events (e.g., phone calls, WAP Messages, receiving MMC, receiving SMS, etc.)." '192 Patent at 12:3-20.   None of these characteristics indicate performance of the mobile device as claim 1 requires.   Nor does the specification describe *how* any of the above characteristic would *indicate* performance of the mobile device.   Without more, a POSITA would not have understood with reasonable certainty how a network characteristic indicates performance of the mobile device.   The specification of the '192 Patent does not sufficiently support the scope of the post-issuance amendment and claim 1 lacks sufficient written description.

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

e)   "one or more profile display windows"

Claim 1 of the '192 Patent recites a software authoring interface "configured to simultaneously emulate, via one or more profile display windows, a plurality of network characteristics … ."   The specification of the '192 Patent, however, never discloses emulating in more than one profile display windows at the same time.   The lack of explanation in the specification would not allow a POSITA to recognize that the inventor invented what is claimed."

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement. Dependent claims 61-62 and 65 of the '192 Patent, which depend from claim 60, also inherit this deficiency and likewise fail under the written description requirement.

f)   **"simulate a network connection state encountered by the mobile device"**

Claim 1 of the '192 Patent recites that the "software authoring interface" be configured to "simultaneously visually emulate … a plurality of network characteristics indicative of performance of the mobile device," and "further configured to simulate a network connection state encountered by the mobile device." The specification of the '192 Patent, however, provides insufficient guidance as to what a "network connection state" is. Neither "network connection" or "network connection state" is used in the specification at all. There is also no explanation of what it means for a network connection state to be "encountered by" the mobile device. This lack of explanation in the specification would not allow a POSITA to recognize that the inventor invented what is claimed."

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

g)   **"the connection simulation includes one or more profiles"**

Claim 4 of the '192 Patent recites "the connection simulation includes one or more profiles." The specification recites "exemplary windows that allow a user to interact with emulator 101 for configuring and testing operation of application 104 within model 102 when simulating connection to a wireless network." '192 Patent, at 10:34-38. However, the specification does not disclose the connection simulation that includes one or more profiles. The lack of disclosure for a system for *connection simulation* which *includes one or more profiles* in the specification would not allow a POSITA to recognize that the inventor invented what is claimed.

The specification mentions network profiles and device profiles, but is silent on selectable simulation profiles. And it doesn't explain what a network profile is or how to use it. While the specification mentions "profiles," only a single use of "profile" in the specification is arguably

relevant: "Model data 820 may, for example, represent live network profiles." '192 Patent, at 10:46-47. However, what this means is never explained." On other occasions when "profiles" are mentioned in the specification, they are not relevant to the profiles of the limitation "the connection simulation includes one or more profiles." *See, e.g.*, '192 Patent, at 11:2-3 ("(e.g., new mobile phone models and live mobile profiles)"; 14:23-25 ("Live server and profile updates would substantially reduce and alleviate a high churn rate of development life cycles."). The cited mobile profiles are different from the profiles of a connection simulation. Other "profilers" and associated "profiles" and "profile data" in the specification refer to output data (monitoring resource utilization), rather than the input data (network connection simulation) required by this claim limitation.

Therefore, Claim 4 is invalid because it does not meet the written description requirement.

Dependent claims 5-7 of the '192 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the written description requirement.

h)   "an application configured to enable a user to modify a photo on the mobile device"

Claim 60 of the '192 Patent recites "an application configured to enable a user to modify a photo on the mobile device." The specification, however, dose not provide any written description of such an application. There is no disclosure whatsoever of any application or software including the claimed functionality, let alone sufficient disclosure to "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad*, 598 F.3d at 1351. The naked reference, without any explanation or detail, to "ImageVu™ (a personalized Over-the-Air photo imaging line)" ('192 Patent, 4:8-9) does not, in any way, convey possession of an application that enables a user to modify a photo as claimed.

The specification of the '192 Patent further provides no guidance as to what it means "to modify a photo." Outside of Claim 60 and several other claims that depend on Claim 60, "a photo" is not used in the specification at all. There is also no explanation of what it means for a user "to modify a photo" anywhere in the specification. This lack of explanation in the specification would not allow a POSITA to recognize that the inventor invented what is claimed. Therefore, Claim 60 is invalid because it does not meet the written description requirement.

Dependent claims 61-62 and 65 of the '192 Patent, which depend from claim 60, inherit this deficiency and likewise fail under the written description requirement. Furthermore, these dependent claims recite additional limitations referring to photo modification which have no written description support in the specification. Claim 61 recites "to add content to modify the photo." Claim 62 recites "wherein the content includes text," referring to the content to modify the photo of Claim 61. Claim 65 recites "to distribute the modified photo through a server or other connection to the internet." Therefore, these dependent claims fail under the written description requirement for these additional reasons.

2.   Lack of Enablement

A patent specification must contain "a written description of the invention . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." *See* 35 U.S.C. §112(1). After reading the specification, one skilled in the art, must be able to "practice the claimed invention without undue experimentation." *AK Steel Corp. v. Sollac*, 344 F.3d. 1234, 1244 (Fed. Cir. 2003). Further, "'It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.' Although the knowledge of one skilled in the art is indeed relevant, the novel aspect of an invention must be enabled in the patent." *Automotive Technologies International, Inc. v. BMW of North America, Inc.* 501 F.3d. 1274, 1283.

a)   **"an application for a mobile device"**

As described in Section VI.A.1.b) above, the '192 Patent does not sufficiently describe the entire scope of applications for a mobile device. This full scope is similarly not enabled by the specification of the '192 Patent. That section, and the evidence described therein is incorporated here by reference.

While the specification may enable a POSITA to make a system as claimed for developing a "frame-based" application, it does not sufficiently teach a POSITA how to make a system for other types of applications. For example, the '192 Patent describes the claimed "one or more profile display windows" as follows:

> In one example, operation, Flash Player 154 plays application 104 within model 102. In particular, player 154 processes frames 223 of application 104 based upon ordering of timeline 222. One or more profiler modules 202, 204, 206 and 208 within profiler 106 monitor resource utilization of each frame, storing results as profiled data 152. Profiled data 152 is then displayed as frame based profile data 110 on display 140 for review by the user.

'192 Patent, 8:24-31. This explains how a frame-based application may be profiled on a per-frame basis. The claimed "one or more profile display windows" then displays the results of this profiling on a per-frame basis.

However, there is no disclosure regarding how the system would work for other types of applications. It would have required undue experimentation on the part of a POSITA to make a system as claimed for non-frame-based applications.   As such, the full scope of the claim is not enabled and the claim is therefore invalid. Asserted claims 8, 13, 14, and 17 depend from claim 1 and are also invalid for this same deficiency.

b)   "emulate"

Claims 1 and 60 of the '192 Patent recite a software authoring interface configured to simultaneously visually "emulate … a plurality of network characteristics." The specification of the '192 Patent does not disclose any detail that would enable a POSITA to make or use such software authorizing interface without undue experimentation. In particular, there is no disclosure or teaching of subject matter that would permit a POSITA to create a set of computer instructions for such software authorizing interface to emulate a plurality of network characteristics as claimed. The specification of the '579 Patent discloses an "emulator" that may is purportedly configured to perform various functions. For example, Figure 6 of the '192 patent illustrates "a method for modeling and profiling an application to play on a mobile device that includes a Flash Player." '192 Patent at 3:8-10, FIG. 6. Figure 7 illustrates another "method for authoring, emulating and profiling an application to play on a mobile device that includes a Flash Player." '192 Patent at 3:12-14, FIG. 7. The specification for the '192 Patent discloses that the method of Figures 6 may "be implemented within emulator 101." '192 Patent at 9:20-21, 9:48-49. Figure 8 is "a block diagram illustrating the emulator of FIG. 1 interacting with an operator development server via the Internet for simulating playing of the application within a mobile device connected to a wireless network." '192 Patent at 3:14-17, FIG. 8. Figure 8 simply depicts block diagrams, with Emulator 101 containing device model 102, which contains network simulator interface 804:

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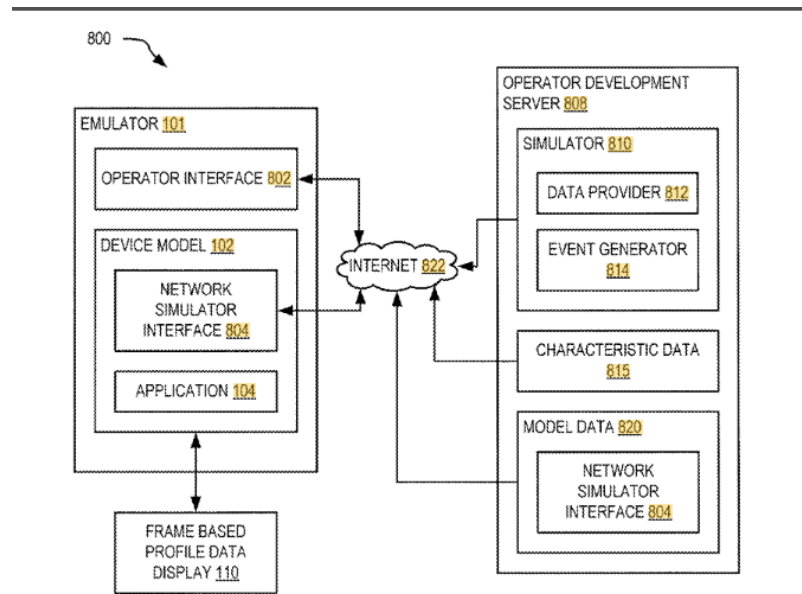
FIG. 8

There is no detail, such as an algorithm or example computer code, provided in specification of the '192 Patent of how the plurality of network characteristics (or hardware characteristics in the case of claim 60) indicative of performance of the mobile device is "emulated." The specification lacks information on how to make the blocks work together to perform the functions as purported. The specification states that "method 600 emulates the mobile device using a model based upon the characteristics," and that "emulator 101 generates device model 102 based upon mobile device characteristics 115," '192 Patent at 27-30, but the specification fails to explain how the device model "emulates" anything. The specification states that "[m]odel algorithms 148 represent one or more algorithms that operate to generate mobile device model 102 to emulate mobile device 114 while executing application 104." '192 Patent at 5:48-52. Again, no actual or exemplary algorithms are provided.

In related litigation, Wapp argued that claim 1 of the '192 Patent should have recited "simulate" instead of "emulate." Wapp cannot unilaterally re-write the claims after issuance and in litigation. But even if the '192 Patent were so corrected, the specification still fails to provide

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detail that would enable a POSITA to make or use the alleged invention to "simulate" a plurality

of network characteristics. For example, the specification of the '192 Patent states:

> *In one example of operation, emulator 101 downloads a network simulator interface 804 from operator development server 808 into device model 102 as shown in FIG. 8. Network simulator interface 804 includes functionality that allows device model 102 to communicate with simulator 810 to simulate connectivity of mobile device 114 with a wireless network.* Specifically, network simulator interface 804 within model 102 interacts with data provider 812 and event generator 814 to determine resource utilization resulting from network interaction by model 102.

'192 Patent, at 11:5-14. Again, the '192 patent does not provide detail of how "network

characteristics" are simulated. The specification lacks detail on how to program device model 102

to "simulate" network characteristics. The specification's generic and conclusory statements fail

to provide the full, clear, concise, and exact terms needed to enable a POSITA to make and use

either of the systems claimed in claims 1 or 60.

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, inherit

this deficiency and likewise fail under the enablement requirement. Dependent claims 61-62 and

65 of the '192 Patent, which depend from claim 60, also inherit this deficiency and likewise fail

under the enablement requirement.

c)   "simultaneously visually emulate … a plurality of network characteristics"

As discussed in Section VI.A.1.c) above, the '192 Patent lacks disclosure of this limitation

in a manner that would convey to a POSITA that the inventor had possession of the claimed subject

matter as of the filing date. Because this limitation is not described in the written disclosure of the

'192 Patent, a POSITA would not have been enabled to practice this limitation without undue

experimentation.   Thus, claims 1-7, 9, 12, and 13 of the '192 Patent fail the enablement

requirement.

d)   "network characteristics indicative of performance of the mobile device when executing the application"

As discussed in Section VI.A.1.b) above, the '192 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '192 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation.   Thus, claims 1-7, 9, 12, and 13 of the '192 Patent fail the enablement requirement.

e)   "simulate a network connection state encountered by the mobile device"

As discussed in Section VI.A.1.f) above, the '192 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '192 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation.   Thus, claims 1-7, 9, 12, and 13 of the '192 Patent fail the enablement requirement.

f)   "an application configured to enable a user to modify a photo"

As discussed in Section VI.A.1.f) above, the '192 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date.   Because this limitation is not described in the written disclosure of the '192 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation. Creating such an application from scratch, absent any sort of description or guide from the specification, would have required undue experimentation by a POSITA. Thus, claims 60-62 and 65 of the '192 Patent fail the enablement requirement.

Furthermore, dependent claims 61-62 and 65 recite additional limitations referring to photo modification. Claim 61 recites "to add content to modify the photo." Claim 62 recites "wherein the content includes text," referring to the content to modify the photo of Claim 61. Claim 65 recites "to distribute the modified photo through a server or other connection to the internet." The '192 Patent lacks disclosure of these limitations in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date.   Because these limitations are not described in the written disclosure of the '192 Patent, a POSITA would not have been enabled to practice these limitations without undue experimentation. Therefore, dependent claims 61-62 and 65 fail under the enablement requirement for these additional reasons.

g)   "the connection simulation includes one or more profiles"

Claim 4 of the '192 Patent recites "the connection simulation includes one or more profiles." Because this limitation is not described in the written disclosure of the '192 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation. Creating such a simulation from scratch, absent any sort of description or guide from the specification, would have required undue experimentation by a POSITA.

The specification recites "exemplary windows that allow a user to interact with emulator 101 for configuring and testing operation of application 104 within model 102 when simulating connection to a wireless network." '192 Patent, at 10:34-38. However, the specification does not disclose the connection simulation that includes one or more profiles. The lack of disclosure for a system for *connection simulation* which *includes one or more profiles* in the specification would not have enabled a POSITA to practice this limitation without undue experimentation.

The specification mentions network profiles and device profiles, but is silent on selectable simulation profiles. And it doesn't explain what a network profile is or how to use it. While the specification mentions "profiles," only a single use of "profile" in the specification is arguably

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relevant: "Model data 820 may, for example, represent live network profiles." '192 Patent, at 10:46-47. However, what this means is never explained." On other occasions when "profiles" are mentioned in the specification, they are not relevant to the profiles of the limitation "the connection simulation includes one or more profiles." *See, e.g.*, '192 Patent, at 11:2-3 ("(e.g., new mobile phone models and live mobile profiles)"; 14:23-25 ("Live server and profile updates would substantially reduce and alleviate a high churn rate of development life cycles."). The cited mobile profiles are different from the profiles of a connection simulation. Other "profilers" and associated "profiles" and "profile data" in the specification refer to output data (monitoring resource utilization), rather than the input data (network connection simulation) required by this claim limitation.

Therefore, Claim 4 is invalid because it does not meet the enablement requirement.

Dependent claims 5-7 of the '192 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the enablement requirement.

3.   Indefiniteness

35 U.S.C. §112, paragraph 2, requires that "[T]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. *See* 35 U.S.C. §112(2). The Supreme Court held that "[a]patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus Inc. v. Biosig Instruments Inc.*, 134 S. Ct. 2120, 2124 (2014).

a)   "network characteristics indicative of performance of the mobile device"

The specification of the '192 Patent does not inform a person of skill in the art about the scope of the invention with reasonable certainty with respect to the claim term "network

characteristics" that indicate the "performance of the mobile device." The specification describes the "network characteristics" as scripted events (e.g., cell tower identification, service message, bandwidth, etc.), consumer events (e.g., checking email, checking messages, browsing network, available minutes, selecting images, etc.), and incoming events (e.g., phone calls, WAP Messages, receiving MMC, receiving SMS, etc.)." '192 patent, 12:3-11. None of these characteristics indicate performance of the mobile device as claim 1 requires. Nor does the specification describe *how* any of the above characteristics would *indicate* performance of the mobile device. Without more, a POSITA would not have understood with reasonable certainty how a network characteristic indicates performance of the mobile device.

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

b)   "on the mobile device"

Claim 60 of the '192 Patent recite "the mobile device" without reciting "a mobile device." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." Halliburton Energy Servs., Inc. v. M-I LLC, 514 F.3d 1244, 1249 (Fed. Cir. 2008). This court found a claim indefinite where there was lack of antecedent basis for the term in an independent claim. Wapp Tech Ltd. P 'ship v. Seattle Spinco, Inc., No. 4:18-CV-469, 2020 WL 1983087, at *24 (E.D. Tex. Apr. 27, 2020) (finding the claim indefinite where the term "the test" did not have an antecedent basis in an independent claim).

Claim 60 is an independent claim, and therefore there is no other claim which may provide an antecedent basis for "the mobile device" in claim 60. Therefore, the recital of "the mobile device" in Claim 60 of the '192 Patent lacks explicit antecedent basis. Wapp Tech, 2020 WL 1983087 at *24. Furthermore, "the mobile device" term of Claim 60 is used in a limitation "an

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application configured to enable a user to modify a photo on the mobile device." However, the term "the mobile device" does not limit the claim in any discernable way. "The mobile device" does not limit "an application," "a user," or "a photo," or "to modify." In other words, in the absence of the explicit antecedent basis for the mobile device in Claim 60, "such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." Halliburton, 514 F.3d at 1249. "This lack of antecedent basis renders [this claim] indefinite." Wapp Tech, 2020 WL 1983087 at *24.

Dependent claims 61, 62, and 65 of the '192 Patent, which depend from claim 60, inherit this deficiency and likewise fail under the definiteness requirement.

c)   "to modify a photo"

Claim 60 of the '192 Patent recites "an application configured to enable a user to modify a photo on the mobile device." The specification of the '192 Patent, however, provides no guidance as to what it means "to modify a photo." Specification does not provide any bounds on "modify," and POSITA would not have understood the meaning of this phrase. Public is not placed on notice of the bound of the claim, including whether or not editing metadata counts as modifying, and whether or not merely changing the display of the photo, e.g. scrolling or scaling, count as modifying. Therefore, Claim 60 is invalid because it does not meet the definiteness requirement.

Dependent claims 61, 62, and 65 of the '192 Patent, which depend from claim 60, inherit this deficiency and likewise fail under the definiteness requirement.

d)   "the connection simulation"

Claim 4 of the '192 Patent recites "the connection simulation" without reciting "a connection simulation." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008).

This court found a claim indefinite where there was lack of antecedent basis for the term in an independent claim. *Wapp Tech Ltd. P'ship v. Seattle Spinco, Inc.*, No. 4:18-CV-469, 2020 WL 1983087, at *24 (E.D. Tex. Apr. 27, 2020) (finding the claim indefinite where the term "the test" did not have an antecedent basis in an independent claim).

Claim 4 is a dependent claim. It depends from Claim 2, which does not recite "a connection simulation." Claim 2 depends from independent Claim 1, which also does not recite "a connection simulation." Therefore, the recital of "the connection simulation" in Claim 4 of the '192 Patent lacks explicit antecedent basis. Claim 2 recites "one or more connection simulations" – a different phrase than "a connection simulation." A POSITA would not have understood if "the connection simulation" of Claim 4 refers to "one or more connection simulations" of Claim 2. Therefore, in the absence of the explicit antecedent basis for the connection simulation in Claim 4, "such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton*, 514 F.3d at 1249. "This lack of antecedent basis renders [this claim] indefinite." *Wapp Tech*, 2020 WL 1983087 at *24. Therefore, Claim 4 of the '192 Patent is invalid as indefinite.

Dependent claims 5-7 of the '192 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the definiteness requirement.

e)   **"the connection simulation includes one or more profiles"**

Claim 4 of the '192 Patent recites "the connection simulation includes one or more profiles." The specification of the '192 Patent, however, provides no guidance as to what it means for "the connection simulation" to "include[] one or more profiles." The specification does not provide any bounds on "the connection simulation," and POSITA would not have understood how, if at all, "includes one or more profiles" limits "the connection simulation." The specification does not explain, and POSITA would not have understood, what is a profile and how you can have a

connection simulation without a profile. Therefore, Claim 4 is invalid because it does not meet the definiteness requirement.

Dependent claims 5-7 of the '192 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the definiteness requirement.

4. Patent Ineligible Subject Matter

Section V above sets forth reasons why all of the Asserted Claims of all Asserted Patents, including claims 1-7, 9, 12, 13, 60-62, and 65 of the '192 Patent are patent ineligible under 35 U.S.C. § 101 for being directed to an abstract idea under step one of *Alice*. Section V further explains that the claim elements do not transfer any of the claims into patent-eligible subject matter. Section V is incorporated by reference here.

a) "A system … comprising: a software authoring interface configured to …"

In addition to the reasons set forth above in Section V as to why all of the Asserted Claims of all Asserted Patents are patent ineligible, the asserted claims of the '864 patent are patent ineligible because they are directed to a system comprising only software. Claim 1 recites "[a] system for developing an application for a mobile device comprising: a software authoring interface configured to … ." Claim 1 recites no hardware limitations. Because claim 1 is directed to "a system" comprising only software (a software authoring interface), and the claims are invalid under 101 for failing to claim a "process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," *See Allvoice Developments US, LLC v. Microsoft Corp.*, 612 Fed. Appx 1009, 1018 (Fed. Cir. 2015) (stating that "disputed claims," which "merely claim software instructions without any hardware limitations" were invalid under 101 despite plaintiffs argument that the "claimed software must necessarily be in a machine readable, physical state in order to exist").

Dependent claims 2-7, 9, 12, and 13 of the '192 Patent, which depend from claim 1, do not recite any hardware limitations either, and are patent ineligible for the same reasons.

b)   "A system comprising: an application …"

Claim 60 recites "A system for developing an application for a mobile device comprising: a software authoring interface … ." The purported system of 60 claim is limited only by "an application," which a POSITA would have understood to be a recitation of software. Claim 60 does not include any limitations relating to hardware or otherwise limit the claim to a tangible embodiment. For reasons similar to those described above in Section VI.A.4.a), Claim 60 is not directed to a statutory category of subject matter and is invalid under 35 U.S.C. § 101.

B.   The '864 Patent

JPMC maintains that claims 1, 8, 13, 14, and 17 of the '864 Patent are invalid for failure to meet the requirements of 35 U.S.C. § 112. To the extent the following contentions reflect constructions of claim limitations consistent with or implicit in Plaintiffs' infringement contentions, no inference is intended nor should any be drawn that JPMC agrees with Plaintiffs' claim constructions.

1.   Lack of An Adequate Written Description

35 U.S.C. §112, paragraph 1, includes a written description requirement. *See* 35 U.S.C. § 112(1) ("The specification shall contain a written description of the invention . . . of the manner and process of making and using [the invention] in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same."). To satisfy the written description requirement, the specification must "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (internal citation omitted). In other words, the test for sufficiency is whether the disclosure of the

application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. *Id.*

a) "system for testing"

Claim 1 recites "a system for testing an application for a mobile device." The specification of the '864 Patent, however, does not disclose a system for testing. The specification mentions a "system," but discloses a system for "emulating and profiling a frame based application." '864 Patent, at 3:66-4:2. *See also*, '864 Patent, at 3:50-53. "FIG. 1A shows one exemplary embodiment of a system for emulating, authoring, and visually profiling an application."). The lack of disclosure for a system for *testing an application* in the specification would not allow a POSITA to recognize that the inventor invented what is claimed.

Dependent claims 8, 13, 14, and 17 of the '864 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

a) "an application for a mobile device"

Claim 1 recites "a system for developing an application for a mobile device." There is insufficient written description to support the entire scope of the term "an application for a mobile device." While the specification uses the term "application," the presence of this generic claim language in the original disclosure does not satisfy the written description requirement because it fails to support the scope of the genus claimed. *Ariad Pharm. Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1349-50 (Fed. Cir. 2010) ("[A]n adequate written description of a claimed genus requires more than a generic statement of an invention's boundaries.") (citing *Regents of the Univ. of Cal. v. Eli Lilly*, 119 F.3d 1559, 1568 (Fed. Cir. 1997), cert. denied, 523 U.S. 1089 (1998)).

There are myriad ways to write and develop a mobile device application. Some applications, like those described by the '864 specification, but this is only a small subset of the whole world of applications for mobile devices. The claim language "an application for a mobile

device" purports to cover this much broader genus including all types mobile device applications, but the specification supports only the narrower category of frame-based applications. For example, the '864 Patent describes the operation of the profiler as follows:

> Profiler 106 monitors playing of frame based application 104 within model 102 to estimate resource usage of application 104 and generates a frame based profile data display 110. Frame based profile data display 110 may allow a user of system 100 to identify areas within application 104 that would exceed resources of mobile device 114.

'864 Patent, 4:28-33.

There is no indication that the inventor of the '864 Patent had possession of a system for developing applications other than frame-based applications. And the written description requirement cannot be satisfied "merely by clearly describing one embodiment of the thing claimed." *LizardTech v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005). The '864 Patent's disclosure of profiling performance of one specific type of application does not provide adequate description for a more generic system for developing all types of applications for mobile devices.

Extrinsic evidence also supports that that the inventor of the '864 Patent did not possess a system for developing all types of applications. In communications regarding a proposed product based off of the subject matter of the '864 Patent, the inventor was questioned:

> "Lastly you focus on frames. Is that the way to think about this problem? Increasingly, through things like Flex, Flash development will move away from frames since frames are not the right level of abstraction for application development. How will MCOM work in this case?"

WAPP0010358. Rather than addressing the proposed product's ability to develop applications other than frame-based applications, the inventor responded that "remov[ing] the layered timelines and frames and you reduce Flash Lite development to the realms of Java, .NET, and BREW –

coding without a palette (it is similar to giving an artist no canvass to paint on – that is why Flash has succeeded tremendously on the entertainment side)." *Id.*

Accordingly, the broad genus of "application for a mobile device" was not in the inventor's possession at the time of invention. Instead, the specification supports only "frame-based applications." Because the specification does not support the entire scope of the this term, the claim is invalid for lack of adequate written description. Asserted claims 8, 13, 14, and 17 all depend from claim 1 and are also invalid for this same deficiency.

b) "network characteristics indicative of performance of the mobile device when executing the application"

The discussion of the prosecution history of the '192 Patent in Section VI.A.1.c) above is hereby incorporated by reference. Claim 1 recites software that is configured to "simulate … a plurality of network characteristics indicative of performance of the mobile device when executing the application." The specification of the '864 Patent does not sufficiently describe "network characteristics" that indicate the "performance of the mobile device when executing the application." Rather, the specification describes the "network characteristics" as scripted events (e.g., cell tower identification, service message, bandwidth, etc.), consumer events (e.g., checking email, checking messages, browsing network, available minutes, selecting images, etc.), and incoming events (e.g., phone calls, WAP Messages, receiving MMC, receiving SMS, etc.)." '864 Patent, at 11:52-57. None of these characteristics indicate performance of the mobile device as claim 1 requires. Nor does the specification describe *how* any of the above characteristic would *indicate* performance of the mobile device. Without more, a POSITA would not have understood with reasonable certainty how a network characteristic indicates performance of the mobile device. The specification of the '864 Patent does not sufficiently support the scope of the post-issuance

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amendment made during the prosecution of the '192 Patent. Claim 1 of the '864 Patent lacks sufficient written description.

Dependent claims 8, 13, 14, and 17 of the '864 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

2.   Lack of Enablement

A patent specification must contain "a written description of the invention . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." *See* 35 U.S.C. §112(1). After reading the specification, one skilled in the art, must be able to "practice the claimed invention without undue experimentation." *AK Steel Corp. v. Sollac*, 344 F.3d. 1234, 1244 (Fed. Cir. 2003). Further, "'It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.' Although the knowledge of one skilled in the art is indeed relevant, the novel aspect of an invention must be enabled in the patent." *Automotive Technologies International, Inc. v. BMW of North America, Inc.* 501 F.3d. 1274, 1283.

a)   "an application for a mobile device"

As described in Section VI.B.1.a) above, the '864 Patent does not sufficiently describe the entire scope of applications for a mobile device. This full scope is similarly not enabled by the specification of the '864 Patent. That section, and the evidence described therein is incorporated here by reference.

While the specification may enable a POSITA to make a system as claimed for developing a "frame-based" application, it does not sufficiently teach a POSITA how to make a system for other types of applications. For example, the '864 Patent describes the claimed "one or more profile display windows" as follows:

> In one example, operation, Flash Player 154 plays application 104 within model 102. In particular, player 154 processes frames 223 of application 104 based upon ordering of timeline 222. One or more profiler modules 202, 204, 206 and 208 within profiler 106 monitor resource utilization of each frame, storing results as profiled data 152. Profiled data 152 is then displayed as frame based profile data 110 on display 140 for review by the user.

'864 Patent, 7:56-63. This explains how a frame-based application may be profiled on a per-frame basis. The claimed "one or more profile display windows" then displays the results of this profiling on a per-frame basis.

However, there is no disclosure regarding how the system would work for other types of applications. It would have required undue experimentation on the part of a POSITA to make a system as claimed for non-frame-based applications. As such, the full scope of the claim is not enabled and the claim is therefore invalid. Asserted claims 8, 13, 14, and 17 depend from claim 1 and are also invalid for this same deficiency.

b) "simulate"

Claim 1 of the '864 Patent recites software configured to "simulate … a plurality of network characteristics indicative of performance of the mobile device when executing the application." The specification of the '864 Patent does not disclose any detail that would enable a POSITA to make or use such software without undue experimentation. In particular, there is no disclosure or teaching of subject matter that would permit a POSITA to create a set of computer instructions for such software to simulate a plurality of network characteristics as claimed.

There is no detail, such as an algorithm or example computer code, provided in specification of the '864 Patent of how the plurality of network characteristics indicative of performance of the mobile device is "simulated." The specification lacks information on how to make the blocks work together to perform the functions as purported. For example, the specification of the '864 Patent states:

> *In one example of operation, emulator 101 downloads a network simulator interface 804 from operator development server 808 into device model 102 as shown in FIG. 8. Network simulator interface 804 includes functionality that allows device model 102 to communicate with simulator 810 to simulate connectivity of mobile device 114 with a wireless network.* Specifically, network simulator interface 804 within model 102 interacts with data provider 812 and event generator 814 to determine resource utilization resulting from network interaction by model 102.

'864 Patent, at 10:51-60. The '864 patent does not provide detail of how "network characteristics" are simulated. The specification lacks detail on how to program device model 102 to "simulate" network characteristics. The specification's generic and conclusory statements fail to provide the full, clear, concise, and exact terms needed to enable a POSITA to make and use the system of claim 1.

Dependent claims 8, 13, 14, and 17 of the '864 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the enablement requirement.

a) "network characteristics indicative of performance of the mobile device when executing the application"

As discussed in Section VI.C.1.c) above, the '678 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '678 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation. Thus, claims 1-7, 9, 12, 13, 21, and 22 of the '678 Patent fail the enablement requirement.

a) "the connection simulation includes one or more profiles"

Claim 4 of the '678 Patent recites "the connection simulation includes one or more profiles." Because this limitation is not described in the written disclosure of the '678 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation.

Creating such a simulation from scratch, absent any sort of description or guide from the specification, would have required undue experimentation by a POSITA.

The specification recites "exemplary windows that allow a user to interact with emulator 101 for configuring and testing operation of application 104 within model 102 when simulating connection to a wireless network." '678 Patent, at 10:53-57. However, the specification does not disclose the connection simulation that includes one or more profiles. The lack of disclosure for a system for *connection simulation* which *includes one or more profiles* in the specification would not have enabled a POSITA to practice this limitation without undue experimentation.

The specification mentions network profiles and device profiles, but is silent on selectable simulation profiles. And it doesn't explain what a network profile is or how to use it. While the specification mentions "profiles," only a single use of "profile" in the specification is arguably relevant: "Model data 820 may, for example, represent live network profiles." '678 Patent, at 10:65-66. However, what this means is never explained." On other occasions when "profiles" are mentioned in the specification, they are not relevant to the profiles of the limitation "the connection simulation includes one or more profiles." *See, e.g.*, '678 Patent, at 11:22-23 ("(e.g., new mobile phone models and live mobile profiles)"; 14:52-54 ("Live server and profile updates would substantially reduce and alleviate a high churn rate of development life cycles."). The cited mobile profiles are different from the profiles of a connection simulation. Other "profilers" and associated "profiles" and "profile data" in the specification refer to output data (monitoring resource utilization), rather than the input data (network connection simulation) required by this claim limitation.

Therefore, Claim 4 is invalid because it does not meet the enablement requirement.

Dependent claims 5-7 of the '678 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the enablement requirement.

3.   Indefiniteness

35 U.S.C. §112, paragraph 2, requires that "[T]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. *See* 35 U.S.C. §112(2). The Supreme Court recently held that "[a]patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus Inc. v. Biosig Instruments Inc.*, 134 S. Ct. 2120, 2124 (2014).

a)   "network characteristics indicative of performance of the mobile device"

The specification of the '864 Patent does not inform a person of skill in the art about the scope of the invention with reasonable certainty with respect to the claim term "network characteristics" that indicate the "performance of the mobile device." The specification describes the "network characteristics" as scripted events (e.g., cell tower identification, service message, bandwidth, etc.), consumer events (e.g., checking email, checking messages, browsing network, available minutes, selecting images, etc.), and incoming events (e.g., phone calls, WAP Messages, receiving MMC, receiving SMS, etc.)." '864 patent, 11:51-58. None of these characteristics indicate performance of the mobile device as claim 1 requires. Nor does the specification describe *how* any of the above characteristics would *indicate* performance of the mobile device. Without more, a POSITA would not have understood with reasonable certainty how a network characteristic indicates performance of the mobile device.

4.   Patent Ineligible Subject Matter

Section V above sets forth reasons why all of the Asserted Claims of all Asserted Patents, including claims 11, 8, 13, 14, and 17 of the '864 Patent are patent ineligible under 35 U.S.C. § 101 for being directed to an abstract idea under step one of *Alice*. Section V further explains that the claim elements do not transfer any of the claims into patent-eligible subject matter. Section V is incorporated by reference here.

a)   "A system … comprising: software …"

In addition to the reasons set forth above in Section V as to why all of the Asserted Claims of all Asserted Patents are patent ineligible, the asserted claims of the '864 patent are patent ineligible because they are directed to a system comprising only software. Claim 1 recites "A system for testing an application for a mobile device comprising: software … ." Claim 1 recites no hardware limitations. In fact, the claim does not recite any limitations beyond those limiting the claimed "software." As such, the claim is expressly drawn to "software per se" and ineligible for patenting. Because claim 1 is directed to "a system" comprising only software (a software authoring interface), and the claims are invalid under 101 for failing to claim a "process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," *See Allvoice Developments US, LLC v. Microsoft Corp.*, 612 Fed. Appx at 1018 (stating that "disputed claims," which "merely claim software instructions without any hardware limitations" were invalid under 101 despite plaintiffs argument that the "claimed software must necessarily be in a machine readable, physical state in order to exist").

Dependent claims 8, 13, 14, and 17 of the '864 Patent, which depend from claim 1, do not recite any hardware limitations either, and are patent ineligible for the same reasons.

C.   The '678 Patent

JPMC maintains that claims 1-7, 9, 12, 13, 21, and 22 of the '678 Patent are invalid for failure to meet the requirements of 35 U.S.C. § 112. To the extent the following contentions reflect constructions of claim limitations consistent with or implicit in Plaintiffs' infringement contentions, no inference is intended nor should any be drawn that JPMC agrees with Plaintiffs' claim constructions.

1.   Lack of An Adequate Written Description

35 U.S.C. §112, paragraph 1, includes a written description requirement. *See* 35 U.S.C. § 112(1) ("The specification shall contain a written description of the invention . . . of the manner and process of making and using [the invention] in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same."). To satisfy the written description requirement, the specification must "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (internal citation omitted). In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. *Id.*

a)   "system for testing"

Claim 1 recites "a system for testing an application for a mobile device." The specification of the '678 Patent, however, does not disclose a system for developing. The specification mentions a "system," but discloses a system for "emulating and profiling a frame based application." '678 Patent, 5:1-4. *See also*, '192 Patent, at 2:63-65 ("FIG. 1A shows one exemplary embodiment of a system for emulating, authoring, and visually profiling an application."). The lack of disclosure

for a system for *testing an application* in the specification would not allow a POSITA to recognize that the inventor invented what is claimed.

Dependent claims 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

b)   "an application for a mobile device"

Claim 1 recites "a system for developing an application for a mobile device." There is insufficient written description to support the entire scope of the term "an application for a mobile device." While the specification uses the term "application," the presence of this generic claim language in the original disclosure does not satisfy the written description requirement because it fails to support the scope of the genus claimed. *Ariad Pharm. Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1349-50 (Fed. Cir. 2010) ("[A]n adequate written description of a claimed genus requires more than a generic statement of an invention's boundaries.") (citing *Regents of the Univ. of Cal. v. Eli Lilly*, 119 F.3d 1559, 1568 (Fed. Cir. 1997), cert. denied, 523 U.S. 1089 (1998)).

There are myriad ways to write and develop a mobile device application. Some applications, like those described by the '678 specification, but this is only a small subset of the whole world of applications for mobile devices. The claim language "an application for a mobile device" purports to cover this much broader genus including all types mobile device applications, but the specification supports only the narrower category of frame-based applications. For example, the '678 Patent describes the operation of the profiler as follows:

> Profiler 106 monitors playing of frame based application 104 within model 102 to estimate resource usage of application 104 and generates a frame based profile data display 110. Frame based profile data display 110 may allow a user of system 100 to identify areas within application 104 that would exceed resources of mobile device 114.

'678 Patent, 5:14-20.

There is no indication that the inventor of the '678 Patent had possession of a system for developing applications other than frame-based applications.   And the written description requirement cannot be satisfied "merely by clearly describing one embodiment of the thing claimed." *LizardTech v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005). The '678 Patent's disclosure of profiling performance of one specific type of application does not provide adequate description for a more generic system for developing all types of applications for mobile devices.

Extrinsic evidence also supports that that the inventor of the '678 Patent did not possess a system for developing all types of applications. In communications regarding a proposed product based off of the subject matter of the '678 Patent, the inventor was questioned:

> "Lastly you focus on frames. Is that the way to think about this problem? Increasingly, through things like Flex, Flash development will move away from frames since frames are not the right level of abstraction for application development. How will MCOM work in this case?"

WAPP0010358.   Rather than addressing the proposed product's ability to develop applications other than frame-based applications, the inventor responded that "remov[ing] the layered timelines and frames and you reduce Flash Lite development to the realms of Java, .NET, and BREW – coding without a palette (it is similar to giving an artist no canvass to paint on – that is why Flash has succeeded tremendously on the entertainment side)." *Id.*

Accordingly, the broad genus of "application for a mobile device" was not in the inventor's possession at the time of invention.   Instead, the specification supports only "frame-based applications."   Because the specification does not support the entire scope of the this term, the claim is invalid for lack of adequate written description. Asserted claims 2-7, 9, 12, 13, 21, and 22 all depend from claim 1 and are also invalid for this same deficiency.

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> c)   "network characteristics … indicative of performance of the mobile device when executing the application"

The discussion of the prosecution history of the '192 Patent in Section VI.A.1.c) above is hereby incorporated by reference. Claim 1 recites a software testing interface configured to "simulate … a plurality of network characteristics … indicative of performance of the mobile device when executing the application." The specification of the '678 Patent does not sufficiently describe "network characteristics" that indicate the "performance of the mobile device when executing the application." Rather, the specification describes the "network characteristics" as scripted events (e.g., cell tower identification, service message, bandwidth, etc.), consumer events (e.g., checking email, checking messages, browsing network, available minutes, selecting images, etc.), and incoming events (e.g., phone calls, WAP Messages, receiving MMC, receiving SMS, etc.)." '678 Patent, at 12:27-33. None of these characteristics indicate performance of the mobile device as claim 1 requires. Nor does the specification describe *how* any of the above characteristic would *indicate* performance of the mobile device. Without more, a POSITA would not have understood with reasonable certainty how a network characteristic indicates performance of the mobile device. The specification of the '678 Patent does not sufficiently support the scope of the post-issuance amendment made during the prosecution of the '192 Patent. Claim 1 of the '678 Patent lacks sufficient written description.

Dependent claims 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

> d)   "one or more profile display windows"

Claim 1 of the '678 Patent recites a software testing interface "configured to simultaneously visually simulate, via one or more profile display windows, a plurality of network characteristics … ." The specification of the '678 Patent, however, never discloses simulating in

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more than one profile display windows at the same time.   The lack of explanation in the specification would not allow a POSITA to recognize that the inventor invented what is claimed."

Dependent claims 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

e)   "operator network characteristics"

Claim 1 of the '678 Patent recites "a plurality of operator network characteristics." The specification of the '678 Patent, however, provides no guidance as to the meaning of the phrase "operator network characteristics."   Outside of Claim 1 and several other claims, "operator network characteristics" is not used in the specification at all. There is no explanation of which characteristics belong to an "operator network" anywhere in the specification. This lack of explanation in the specification of the "operator network characteristics" recited in Claim 1 would not allow a POSITA to recognize that the inventor invented what is claimed. Therefore, Claim 1 is invalid because it does not meet the written description requirement.

Claim 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

f)   "bandwidth availability"

Claim 1 of the '678 Patent recites "bandwidth availability indicative of performance of the mobile device when executing the application." The specification of the '678 Patent, however, provides no guidance as to the meaning of the phrase "bandwidth availability." Outside of Claim 1 and several other claims, "bandwidth availability" is not used in the specification at all. There is no explanation of the meaning of "bandwidth availability indicative of performance of the mobile device when executing the application" anywhere in the specification. While "bandwidth" is mentioned in passing (e.g., the '678 Patent at 11:53; 12:29; 13:62), it is not defined and could mean any one of many different parameters, including, but not limited to, theoretical maximum of

network; theoretical maximum of device; empirical maximum of network; empirical maximum of device; empirical average available on network; empirical average available on device; empirical average usage (of other users) on network; or empirical average usage of the device.

This lack of explanation in the specification of the "bandwidth availability" or "bandwidth availability indicative of performance of the mobile device when executing the application" recited in Claim 1 would not allow a POSITA to recognize that the inventor invented what is claimed. Therefore, Claim 1 is invalid because it does not meet the written description requirement.

Claim 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

g)   "the connection simulation includes one or more profiles"

Claim 4 of the '678 Patent recites "the connection simulation includes one or more profiles." The specification recites "exemplary windows that allow a user to interact with emulator 101 for configuring and testing operation of application 104 within model 102 when simulating connection to a wireless network." '678 Patent, at 10:53-57. However, the specification does not disclose the connection simulation that includes one or more profiles. The lack of disclosure for a system for *connection simulation* which *includes one or more profiles* in the specification would not allow a POSITA to recognize that the inventor invented what is claimed.

The specification mentions network profiles and device profiles, but is silent on selectable simulation profiles. And it doesn't explain what a network profile is or how to use it. While the specification mentions "profiles," only a single use of "profile" in the specification is arguably relevant: "Model data 820 may, for example, represent live network profiles." '678 Patent, at 10:65-66. However, what this means is never explained." On other occasions when "profiles" are mentioned in the specification, they are not relevant to the profiles of the limitation "the connection simulation includes one or more profiles." *See, e.g.*, '678 Patent, at 11:22-23 ("(e.g., new mobile

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phone models and live mobile profiles)"; 14:52-54 ("Live server and profile updates would substantially reduce and alleviate a high churn rate of development life cycles."). The cited mobile profiles are different from the profiles of a connection simulation. Other "profilers" and associated "profiles" and "profile data" in the specification refer to output data (monitoring resource utilization), rather than the input data (network connection simulation) required by this claim limitation.

Therefore, Claim 4 is invalid because it does not meet the written description requirement.

Dependent claims 5-7 of the '678 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the written description requirement.

2.   Lack of Enablement

A patent specification must contain "a written description of the invention . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." *See* 35 U.S.C. §112(1). After reading the specification, one skilled in the art, must be able to "practice the claimed invention without undue experimentation." *AK Steel Corp. v. Sollac*, 344 F.3d. 1234, 1244 (Fed. Cir. 2003). Further, "'It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.' Although the knowledge of one skilled in the art is indeed relevant, the novel aspect of an invention must be enabled in the patent." *Automotive Technologies International, Inc. v. BMW of North America*, *Inc.* 501 F.3d. 1274, 1283.

a)   "an application for a mobile device"

As described in Section VI.C.1.a) above, the '678 Patent does not sufficiently describe the entire scope of applications for a mobile device. This full scope is similarly not enabled by the specification of the '678 Patent. That section, and the evidence described therein is incorporated here by reference.

While the specification may enable a POSITA to make a system as claimed for developing a "frame-based" application, it does not sufficiently teach a POSITA how to make a system for other types of applications. For example, the '678 Patent describes the claimed "one or more profile display windows" as follows:

> In one example, operation, Flash Player 154 plays application 104 within model 102. In particular, player 154 processes frames 223 of application 104 based upon ordering of timeline 222. One or more profiler modules 202, 204, 206 and 208 within profiler 106 monitor resource utilization of each frame, storing results as profiled data 152. Profiled data 152 is then displayed as frame based profile data 110 on display 140 for review by the user.

'678 Patent, 8:42-49. This explains how a frame-based application may be profiled on a per-frame basis. The claimed "one or more profile display windows" then displays the results of this profiling on a per-frame basis.

However, there is no disclosure regarding how the system would work for other types of applications. It would have required undue experimentation on the part of a POSITA to make a system as claimed for non-frame-based applications.   As such, the full scope of the claim is not enabled and the claim is therefore invalid. Asserted claims 2-7, 9, 12, 13, 21, and 22 depend from claim 1 and are also invalid for this same deficiency.

b)   "simulate"

Claim 1 of the '678 Patent recites a software testing interface configured to "simulate … a plurality of operator network characteristics including at least bandwidth availability indicative of performance of the mobile device when executing the application." The specification of the '678 Patent does not disclose any detail that would enable a POSITA to make or use such software testing interface without undue experimentation.   In particular, there is no disclosure or teaching of subject matter that would permit a POSITA to create a set of computer instructions for such software testing interface to simulate a plurality of operator network characteristics as claimed.

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There is no detail, such as an algorithm or example computer code, provided in specification of the '678 Patent of how the plurality of network characteristics indicative of performance of the mobile device is "simulated." The specification lacks information on how to make the blocks work together to perform the functions as purported. For example, the specification of the '678 Patent states:

> *In one example of operation, emulator 101 downloads a network simulator interface 804 from operator development server 808 into device model 102 as shown in FIG. 8. Network simulator interface 804 includes functionality that allows device model 102 to communicate with simulator 810 to simulate connectivity of mobile device 114 with a wireless network.* Specifically, network simulator interface 804 within model 102 interacts with data provider 812 and event generator 814 to determine resource utilization resulting from network interaction by model 102.

'678 Patent, at 11:25-34. The '678 Patent does not provide detail of how "network characteristics" are simulated. The specification lacks detail on how to program device model 102 to "simulate" network characteristics. The specification's generic and conclusory statements fail to provide the full, clear, concise, and exact terms needed to

enable a POSITA to make and use the system of claim 1.

Dependent claims 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the enablement requirement.

c)   "operator network characteristics"

Claim 1 of the '678 Patent recites "a software testing interface configured to simultaneously visually simulate … a plurality of operator network characteristics." The specification of the '678 Patent does not disclose any detail that would enable a POSITA to make or use such software testing interface without undue experimentation. In particular, there is no disclosure or teaching of subject matter that would permit a POSITA to create a set of computer instructions for such software testing interface to simulate a plurality of operator network

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characteristics as claimed. The '678 Patent does not provide detail of what are the "operator network characteristics." The specification's generic and conclusory statements fail to provide the full, clear, concise, and exact terms needed to enable a POSITA to make and use the system of claim 1.

Dependent claims 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the enablement requirement.

d)   "bandwidth availability"

Claim 1 of the '678 Patent recites "bandwidth availability indicative of performance of the mobile device when executing the application." The specification of the '678 Patent does not disclose any detail that would enable a POSITA to make or use software testing interface of Claim 1 without undue experimentation. In particular, there is no disclosure or teaching of subject matter that would permit a POSITA to create a set of computer instructions for such software testing interface to simulate a plurality of operator network characteristics including "at least bandwidth availability indicative of performance of the mobile device when executing the application."

The specification of the '678 Patent, however, provides no guidance as to the meaning of the phrase "bandwidth availability." Outside of Claim 1 and several other claims, "bandwidth availability" is not used in the specification at all. There is no explanation of the meaning of "bandwidth availability indicative of performance of the mobile device when executing the application" anywhere in the specification. While "bandwidth" is mentioned in passing (e.g., the '678 Patent at 11:53; 12:29; 13:62), it is not defined and could mean any one of many different parameters, including, but not limited to, theoretical maximum of network; theoretical maximum of device; empirical maximum of network; empirical maximum of device; empirical average available on network; empirical average available on device; empirical average usage (of other users) on network; or empirical average usage of the device.

The specification's generic and conclusory statements fail to provide the full, clear, concise, and exact terms needed to enable a POSITA to make and use the system of claim 1. Therefore, Claim 1 is invalid because it does not meet the enablement requirement.

Claim 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the enablement requirement.

3.   Indefiniteness

35 U.S.C. §112, paragraph 2, requires that "[T]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. *See* 35 U.S.C. §112(2). The Supreme Court recently held that "[a]patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus Inc. v. Biosig Instruments Inc.*, 134 S. Ct. 2120, 2124 (2014).

a)   "operator network characteristics… indicative of performance of the mobile device when executing the application"

Claim 1 recites "a software testing interface configured to simultaneously visually simulate … a plurality of operator network characteristics… indicative of performance of the mobile device when executing the application." The specification of the '678 Patent does not inform a person of skill in the art about the scope of the invention with reasonable certainty with respect to the claim term "operator network characteristics" that indicate the "performance of the mobile device when executing the application." The specification describes the "network characteristics" as scripted events (e.g., cell tower identification, service message, bandwidth, etc.), consumer events (e.g., checking email, checking messages, browsing network, available minutes, selecting images, etc.), and incoming events (e.g., phone calls, WAP Messages, receiving MMC, receiving SMS, etc.)." '678 Patent, at 12:27-33. None of these characteristics indicate performance of the mobile device

when executing the application as claim 1 requires. Nor does the specification describe *how* any of the above characteristics would *indicate* performance of the mobile device when executing the application. Without more, a POSITA would not have understood with reasonable certainty how an operator network characteristic indicates performance of the mobile device.

Claim 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the definiteness requirement.

b)   "the connection simulation"

Claim 4 of the '678 Patent recites "the connection simulation" without reciting "a connection simulation." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). This court found a claim indefinite where there was lack of antecedent basis for the term in an independent claim. *Wapp Tech Ltd. P 'ship v. Seattle Spinco, Inc.*, No. 4:18-CV-469, 2020 WL 1983087, at *24 (E.D. Tex. Apr. 27, 2020) (finding the claim indefinite where the term "the test" did not have an antecedent basis in an independent claim).

Claim 4 is a dependent claim. It depends from Claim 2, which does not recite "a connection simulation." Claim 2 depends from independent Claim 1, which also does not recite "a connection simulation." Therefore, the recital of "the connection simulation" in Claim 4 of the '192 Patent lacks explicit antecedent basis. Claim 2 recites "one or more connection simulations" – a different phrase than "a connection simulation." A POSITA would not have understood if "the connection simulation" of Claim 4 refers to "one or more connection simulations" of Claim 2. Therefore, in the absence of the explicit antecedent basis for the connection simulation in Claim 4, "such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton*, 514 F.3d at 1249. "This lack of antecedent basis renders [this claim] indefinite."

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Wapp Tech, 2020 WL 1983087 at *24. Therefore, Claim 4 of the '678 Patent is invalid as indefinite.

Dependent claims 5-7 of the '678 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the definiteness requirement.

c) "the connection simulation includes one or more profiles"

Claim 4 of the '678 Patent recites "the connection simulation includes one or more profiles." The specification of the '192 Patent, however, provides no guidance as to what it means for "the connection simulation" to "include[] one or more profiles." The specification does not provide any bounds on "the connection simulation," and POSITA would not have understood how, if at all, "includes one or more profiles" limits "the connection simulation." The specification does not explain, and POSITA would not have understood, what is a profile and how you can have a connection simulation without a profile. Therefore, Claim 4 is invalid because it does not meet the definiteness requirement.

Dependent claims 5-7 of the '678 Patent, which depend from claim 4, inherit this deficiency and likewise fail under the definiteness requirement.

d) "configured to display data to identify application performance"

Claim 21 recites, "where in the software is further configured to display data to identify application performance." This limitation renders claim 21 indefinite because the claim is subject to multiple conflicting interpretations. From reading the claim language, a POSITA would be uncertain whether infringement requirements the software itself to identify application performance, or whether the user or view of the displayed data would perform the "identifying." Claim 21 thus fails to inform, with reasonable certainty, a POSITA about the scope of the invention. *See, e.g., Am. Med. Sys., Inc. v. Biolitec, Inc.*, 666 F. Supp. 2d 216, 223 (D. Mass. 2009)

("The claim language here is subject to multiple conflicting interpretations, dependant upon where a reader supplies the absent verb. Given this, the court must find this claim invalid for indefiniteness under the written description and enablement requirements of 35 U.S.C. § 112 ¶ 2."). Dependent claim 22 of the '678 Patent, which depend from claim 21 1, do not recite any hardware limitations either, and are patent ineligible for the same reasons.

Claim 22 of the '678 Patent, which depend from claim 21, inherit this deficiency and likewise fail under the definiteness requirement.

4.   Patent Ineligible Subject Matter

Section V above sets forth reasons why all of the Asserted Claims of all Asserted Patents, including claims 1-7, 9, 12, 13, 21, and 22 of the '678 Patent are patent ineligible under 35 U.S.C. § 101 for being directed to an abstract idea under step one of *Alice*. Section V further explains that the claim elements do not transfer any of the claims into patent-eligible subject matter. Section V is incorporated by reference here.

a)   "A system … comprising: a software testing interface configured to …"

In addition to the reasons set forth above in Section V as to why all of the Asserted Claims of all Asserted Patents are patent ineligible, the asserted claims of the '678 patent are patent ineligible because they are directed to a system comprising only software. Claim 1 recites "A system for testing an application for a mobile device comprising: a software testing interface configured to … ." Claim 1 recites no hardware limitations. Similar to the "software authoring interface" described above in Section VI.A.4.a), the "software testing interface" is software and does not limit the claim to tangible embodiments. Because claim 1 is directed to "a system" comprising only software, and the claims are invalid under 101 for failing to claim a "process, machine, manufacture, or composition of matter, or any new and useful improvement thereof,"

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See Allvoice Developments US, LLC v. Microsoft Corp., 612 Fed. Appx at 1018 (stating that "disputed claims," which "merely claim software instructions without any hardware limitations" were invalid under 101 despite plaintiffs argument that the "claimed software must necessarily be in a machine readable, physical state in order to exist").

Dependent claims 2-7, 9, 12, 13, 21, and 22 of the '678 Patent, which depend from claim 1, do not recite any hardware limitations either, and are patent ineligible for the same reasons.

D.   The '811 Patent

JPMC maintains that claims 1, 2, 4, 5, 8, 9, 22, 24, and 26 of the '811 Patent are invalid for failure to meet the requirements of 35 U.S.C. § 112. To the extent the following contentions reflect constructions of claim limitations consistent with or implicit in Plaintiffs' infringement contentions, no inference is intended nor should any be drawn that JPMC agrees with Plaintiffs' claim constructions.

1.   Lack of An Adequate Written Description

35 U.S.C. §112, paragraph 1, includes a written description requirement. *See* 35 U.S.C. § 112(1) ("The specification shall contain a written description of the invention . . . of the manner and process of making and using [the invention] in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same."). To satisfy the written description requirement, the specification must "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (internal citation omitted). In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. *Id.*

a)   **"an application to be run on a mobile device"**

Claims 1, 9, and 22 recite "a non-transitory, computer-readable medium comprising software instructions for developing an application to be run on a mobile device." There is insufficient written description to support the entire scope of the term "an application to be run on a mobile device." While the specification uses the term "application," the presence of this generic claim language in the original disclosure does not satisfy the written description requirement because it fails to support the scope of the genus claimed. *Ariad Pharm. Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1349-50 (Fed. Cir. 2010) ("[A]n adequate written description of a claimed genus requires more than a generic statement of an invention's boundaries.") (citing *Regents of the Univ. of Cal. v. Eli Lilly*, 119 F.3d 1559, 1568 (Fed. Cir. 1997), cert. denied, 523 U.S. 1089 (1998)).

There are myriad ways to write and develop a mobile device application. Some applications, like those described by the '811 specification, but this is only a small subset of the whole world of applications for mobile devices. The claim language "an application for a mobile device" purports to cover this much broader genus including all types mobile device applications, but the specification supports only the narrower category of frame-based applications. For example, the '811 Patent describes the operation of the profiler as follows:

> Profiler 106 monitors playing of frame based application 104 within model 102 to estimate resource usage of application 104 and generates a frame based profile data display 110. Frame based profile data display 110 may allow a user of system 100 to identify areas within application 104 that would exceed resources of mobile device 114.

'811 Patent, 5:14-20.

There is no indication that the inventor of the '811 Patent had possession of a system for developing applications other than frame-based applications. And the written description requirement cannot be satisfied "merely by clearly describing one embodiment of the thing

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claimed." *LizardTech v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005). The '811 Patent's disclosure of profiling performance of one specific type of application does not provide adequate description for a more generic system for developing all types of applications for mobile devices.

Extrinsic evidence also supports that that the inventor of the '811 Patent did not possess a system for developing all types of applications. In communications regarding a proposed product based off of the subject matter of the '811 Patent, the inventor was questioned:

> "Lastly you focus on frames. Is that the way to think about this problem? Increasingly, through things like Flex, Flash development will move away from frames since frames are not the right level of abstraction for application development. How will MCOM work in this case?"

WAPP0010358.   Rather than addressing the proposed product's ability to develop applications other than frame-based applications, the inventor responded that "remov[ing] the layered timelines and frames and you reduce Flash Lite development to the realms of Java, .NET, and BREW – coding without a palette (it is similar to giving an artist no canvass to paint on – that is why Flash has succeeded tremendously on the entertainment side)." *Id.*

Accordingly, the broad genus of "application for a mobile device" was not in the inventor's possession at the time of invention.   Instead, the specification supports only "frame-based applications." Because the specification does not support the entire scope of the this term, the claim is invalid for lack of adequate written description. Asserted claims 2, 4, 5, and 8 all depend from claim 1 and are also invalid for this same deficiency. Asserted claims 24 and 26 all depend from claim 22 and are also invalid for this same deficiency.

b)   **"each model includes on or more characteristics indicative of a corresponding mobile device"**

Claim 1 recites the limitation "display a list of a plurality of mobile device models from which a user can select, ***wherein each model includes one or more characteristics*** indicative of a corresponding mobile device." The specification of the '811 Patent does not describe a mobile device model where the model ***includes*** one or more characteristics. The specification only discloses generating models ***based on*** hardware characteristics. *See, e.g.*, '811 Patent at 5:5-7 ("Emulator 101 generates a mobile device model 102, based upon mobile device characteristics 115 of mobile device 114"); '811 Patent at 7:20-22 ("Emulator 101 then generates mobile device model 102, based upon characteristics 115, within memory 132."); '811 Patent at 9:46-47 ("In one example of step 604, emulator 101 generates device model 102 based upon mobile device characteristics 115 into memory 132). Generating a model based upon characteristics does not mean that the model includes those characteristics. The written disclosure of the '811 Patent would not allow a POSITA to recognize that the inventor invented what is claimed in claim 1.

Dependent claims 2, 4, 5, and 8, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

c)   **"display simultaneously two or more graphical images of the application's resource utilization, wherein each graphical image relates to a different resource" / display simultaneously two or more graphical images of the application's resource utilization as it is running, wherein each graphical image relates to a different resource" / "display one ore more graphical images of the application's resource utilization"**

Claim 1 of the '811 Patent recites the limitation "display simultaneously two or more graphical images of the application's resource utilization, wherein each graphical image relates to a different resource."   Claim 9 of the '811 Patent similarly recites the limitation "display simultaneously two or more graphical images of the application's resource utilization as it is

running, wherein each graphical image relates to a different resource."   Claim 22 likewise recites the limitation "display one ore more graphical images of the application's resource utilization."

The specification and figures of the '811 Patent do not depict or describe simultaneous display of more than one of an application's resource utilization. For example, the specification describes Figure 3 as "a display showing one exemplary frame based profile graph," '811 Patent, at 3:5-6, but Figure shows a single graphical display. Figure 5 at best shows one graphical display and one textual display. Because the specification and figures never show the simultaneous display more than one graphical images of an application's resource utilization, it would not allow a POSITA to recognize that the inventor invented what is claimed in claims 1, 9 and 22.

Dependent claims 2, 4, 5, and 8 of the '811 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement. Dependent claims 24 and 26 of the '811 Patent, which depend from claim 22, inherit this deficiency and likewise fail under the enablement requirement.

> **d)   "correspond the utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization"**

Claims 1 and 22 of the '811 Patent recite "correspond utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization." The specification of the '811 Patent contains no description of one or more functions responsible for utilization of a specific displayed resource or any corresponding with such functions. For example, the specification of the '811 Patent mentions profiled data 152 may also be based upon the timeline and frames of application 104 and displayed (e.g., frame based profile data 110) as resource utilization related to one or more of: timeline, frames and processing performance of action scripts." '811 Patent at 8:16-20. But there is no discussion of corresponding

the utilization to functions. There is insufficient disclosure to convey to those skilled in the art that the inventor had possession of the invention claimed in this manner.

Dependent claims 2, 4, 5, and 8, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement. Dependent claims 24 and 26, which depend from claim 22, inherit this deficiency and likewise fail under the written description requirement.

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e)   **"identify one or more functions of the application responsible for utilization of a specific displayed resource at a given time"**

</div>

Claims 9 of the '811 Patent recites "identify one or more functions of the application responsible for utilization of a specific displayed resource at a given time." The specification of the '811 Patent contains no description of one or more functions responsible for utilization of a specific displayed resource or any identification of such functions. For example, the specification of the '811 Patent mentions that "[f]rame based profile data display 110 may allow a user of system 100 to identify areas within application 104 that would exceed resources of mobile device 114." '811 Patent at 5:18-20. But identification by a user of a graphical display does not disclose software instructions causing a computer to "identify one or more functions of the application," There is insufficient disclosure to convey to those skilled in the art that the inventor had possession of the invention claimed in this manner.

Dependent claims 2, 4, 5, and 8, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement.

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f)   **"synched in time as the application is running"**

</div>

Claim 9 of the '811 Patent recites "each graphical image … is synched in time as the application is running." The specification of the '811 Patent, however, provides no guidance as to the meaning of the phrase "synched in time as the application is running." Outside of Claim 9 and

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one other claim, "synched in time as the application is running" is not used in the specification at all. There is no explanation of the meaning of "synched in time as the application is running." Even "synched in time" is not defined and could mean any one of many different things.

This lack of explanation in the specification of the "synched in time" or "synched in time as the application is running" recited in Claim 9 would not allow a POSITA to recognize that the inventor invented what is claimed. Therefore, Claim 9 is invalid because it does not meet the written description requirement.

2.   Lack of Enablement

A patent specification must contain "a written description of the invention . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." *See* 35 U.S.C. §112(1). After reading the specification, one skilled in the art, must be able to "practice the claimed invention without undue experimentation." *AK Steel Corp. v. Sollac*, 344 F.3d. 1234, 1244 (Fed. Cir. 2003). Further, "'It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.' Although the knowledge of one skilled in the art is indeed relevant, the novel aspect of an invention must be enabled in the patent." *Automotive Technologies International, Inc. v. BMW of North America*, *Inc.* 501 F.3d. 1274, 1283.

a)   "an application to be run on a mobile device"

As described in Section VI.D.1.a) above, the '811 Patent does not sufficiently describe the entire scope of applications for a mobile device. This full scope is similarly not enabled by the specification of the '811 Patent. That section, and the evidence described therein is incorporated here by reference.

While the specification may enable a POSITA to make a system as claimed for developing a "frame-based" application, it does not sufficiently teach a POSITA how to make a system for

other types of applications. For example, the '811 Patent describes the claimed "one or more profile display windows" as follows:

> In one example, operation, Flash Player 154 plays application 104 within model 102. In particular, player 154 processes frames 223 of application 104 based upon ordering of timeline 222. One or more profiler modules 202, 204, 206 and 208 within profiler 106 monitor resource utilization of each frame, storing results as profiled data 152. Profiled data 152 is then displayed as frame based profile data 110 on display 140 for review by the user.

'811 Patent, 8:42-49. This explains how a frame-based application may be profiled on a per-frame basis. The claimed "one or more profile display windows" then displays the results of this profiling on a per-frame basis.

However, there is no disclosure regarding how the system would work for other types of applications. It would have required undue experimentation on the part of a POSITA to make a system as claimed for non-frame-based applications.   As such, the full scope of the claim is not enabled and the claim is therefore invalid. Asserted claims 2, 4, 5, and 8 all depend from claim 1 and are also invalid for this same deficiency. Asserted claims 24 and 26 all depend from claim 22 and are also invalid for this same deficiency.

b)   "simulate"

Claim 1 of the '811 Patent recites software instructions that cause a computer to "simulate at least one of the one or more characteristics indicative of the mobile device corresponding to the selected mobile device model … ," and "simulate one or more characteristics indicative of a network on which the mobile device corresponding to the selected model device model can operate … ." Claim 22 of the '811 Patent recites software instructions that cause a computer to "simulate one or more characteristics indicative of the mobile device … ." Claim 24 of the '811 Patent recites that the "instructions simulate one or more characteristics, including bandwidth, indicative of a network on which the mobile device can operate." Claim 26 recites that "the instructions

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simulate one or more network events that occur when interacting with a wireless network … ."

The specification of the '811 Patent does not disclose any detail that would enable a POSITA to

make or use such software instructions without undue experimentation.   In particular, there is no

disclosure or teaching of subject matter that would permit a POSITA to create a set of computer

instructions for such computer to simulate one or more characteristics indicative of the mobile

device, simulate one or more characteristics indicative of a network, and simulate one or more

network events as claimed.

There is no detail, such as an algorithm or example computer code, provided in

specification of the '811 Patent of how the one or more characteristics indicative of the mobile

device and of the network is "simulated." Nor is there any detail, such as an algorithm or example

code, on how a "network event" is simulated. The specification lacks information on how to make

the blocks work together to perform the functions as purported. For example, the specification of

the '811 Patent states:

> *In one example of operation, emulator 101 downloads a network simulator interface 804 from operator development server 808 into device model 102 as shown in FIG. 8. Network simulator interface 804 includes functionality that allows device model 102 to communicate with simulator 810 to simulate connectivity of mobile device 114 with a wireless network.* Specifically, network simulator interface 804 within model 102 interacts with data provider 812 and event generator 814 to determine resource utilization resulting from network interaction by model 102.

'811 Patent, at 11:25-34. The '811 Patent does not provide detail of how "network characteristics"

are simulated. The specification lacks detail on how to program device model 102 to "simulate"

network characteristics. The specification's generic and conclusory statements fail to provide the

full, clear, concise, and exact terms needed to

enable a POSITA to make and use any of the systems of claim 1, claim 22, claim 24, or claim 26.

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Dependent claims 2, 4, 5, and 8 of the '811 Patent, which depend from claim 1, inherit this deficiency and likewise fail under the enablement requirement. Dependent claims 24 and 26 of the '811 Patent, which depend from claim 22, inherit the deficiencies of claim 22 and additionally fail under the enablement requirement for that reason.

  c) **"each model includes one or more characteristics indicative of a corresponding mobile device"**

As discussed in Section VI.A.1.b) above, the '811 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '811 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation. For example, there is no teaching as to how the model can be programmed to include one or more characteristics. Thus, claims 1-2, 4, 5, and 8 of the '192 Patent fail the enablement requirement.

  d) **"correspond the utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization"**

As discussed in Section VI.D.1.d) above, the '811 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '811 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation. For example "corresponding" two things can be done in a multitude of ways, and the description does not teach how to correspond utilization with one or more functions. Thus, claims 1, 2, 4, 5, 8, 22, 24, and 26 of the '811 Patent fail under the enablement requirement.

   e) **"identify one or more functions of the application responsible
for utilization of a specific displayed resource at a given time"**

As discussed in Section VI.D.1.e) above, the '811 Patent lacks disclosure of this limitation

in a manner that would convey to a POSITA that the inventor had possession of the claimed subject

matter as of the filing date. Because this limitation is not described in the written disclosure of the

'811 Patent, a POSITA would not have been enabled to practice this limitation without undue

experimentation. Thus, claim 9 of the '811 Patent fail under the enablement requirement.

   f) **"model one or more characteristics indicative of the targeted
mobile device"**

Claim 9 of the '811 Patent recites software instructions that cause a computer to "model

one or more characteristics indicative of the targeted mobile device." The specification of the '811

Patent does not disclose any detail that would enable a POSITA to make or use such software

instructions without undue experimentation.   In particular, there is no disclosure or teaching of

subject matter that would permit a POSITA to create a set of computer instructions for such

computer to model one or more characteristics indicative of the targeted mobile device as claimed.

There is no detail, such as an algorithm or example computer code, provided in

specification of the '811 Patent of how the one or more characteristics indicative of the mobile

device is "modeled."   For example, the specification states, with reference to Figure 6, that

"method 600 loads characteristics defining performance of the mobile device." '811 Patent at

9:40-41. It further states that "method 600 emulates the mobile device using a model based upon

the characteristics." '811 Patent at 9:45-46. But the specification never explains how the

characteristics are actually modeled, such as by explaining how the model is programmed or by

providing example codes or algorithms for the "modeling."   The specification's generic and

conclusory statements fail to provide the full, clear, concise, and exact terms needed to enable a

POSITA to make and use the computer-readable medium of claim 9. Therefore, Claim 9 is invalid because it does not meet the enablement requirement.

g)   "synched in time as the application is running"

Claim 9 of the '811 Patent recites software instructions that cause a computer to display graphical images such that "each graphical image … is synched in time as the application is running." The specification of the '811 Patent does not disclose any detail that would enable a POSITA to make or use such software instructions without undue experimentation.   In particular, there is no disclosure or teaching of subject matter that would permit a POSITA to create a set of computer instructions for such computer to display graphical images such that "each graphical image … is synched in time as the application is running" as claimed.

The specification lacks detail on how to program application 104 to enable graphical images to be "synched in time as the application is running." The specification's generic and conclusory statements fail to provide the full, clear, concise, and exact terms needed to enable a POSITA to make and use either of the systems of claim 9. Therefore, Claim 9 is invalid because it does not meet the enablement requirement.

3.   Indefiniteness

35 U.S.C. §112, paragraph 2, requires that "[T]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. *See* 35 U.S.C. §112(2). The Supreme Court recently held that "[a]patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus Inc. v. Biosig Instruments Inc.*, 134 S. Ct. 2120, 2124 (2014).

a) **"one or more characteristics indicative of a network on which the mobile device corresponding to the selected mobile device model can operate"**

The term "the selected mobile device" lacks antecedent basis and therefore does not inform a person of skill in the art about the scope of the invention with reasonable certainty. Claim 1 recites software instructions that, when executed, cause a computer to display a "list of a plurality of mobile device models from which a user can select, wherein each model includes one or more characteristics indicative of a corresponding mobile device." It then describes that the software instructions, when executed, cause a computer to simulate "one or more characteristics indicative of a network on which the mobile device corresponding to the selected mobile device model can operate." The claim, however, does not require that any mobile device model is selected, nor does it require that any selected mobile device has characteristics indicative of a network that correspond to it. Thus, there is no antecedent basis for "the selected mobile device" because the claim 1) does not limit or require that a specific mobile device model is selected, and 2) does not require that characteristics indicative of a network are associated with any "selected mobile device." Without more, a POSITA would not have understood with reasonable certainty what "the selected mobile device" refers to in the limitation "one or more characteristics indicative of a network on which the mobile device corresponding to the selected mobile device model can operate."

4. Patent Ineligible Subject Matter

Section V above sets forth reasons why all of the Asserted Claims of all Asserted Patents, including claims 1, 2, 5, 8, 9, 22, 24, and 26 of the '811 Patent are patent ineligible under 35 U.S.C. § 101 for being directed to an abstract idea under step one of *Alice*. Section V further explains that the claim elements do not transfer any of the claims into patent-eligible subject matter. Section V is incorporated by reference here.

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E.   The '579 Patent

JPMC maintains that claims 15-20, 25-29, 33, and 34 of the '579 Patent are invalid for
failure to meet the requirements of 35 U.S.C. § 112. To the extent the following contentions reflect
constructions of claim limitations consistent with or implicit in Plaintiffs' infringement
contentions, no inference is intended nor should any be drawn that JPMC agrees with Plaintiffs'
claim constructions.

1.   Lack of An Adequate Written Description

35 U.S.C. §112, paragraph 1, includes a written description requirement. *See* 35 U.S.C. §
112(1) ("The specification shall contain a written description of the invention . . . of the manner
and process of making and using [the invention] in such full, clear, concise and exact terms as to
enable any person skilled in the art to which it pertains, or with which it is most nearly connected,
to make and use the same."). To satisfy the written description requirement, the specification must
"clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is
claimed." *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010)
(internal citation omitted). In other words, the test for sufficiency is whether the disclosure of the
application relied upon reasonably conveys to those skilled in the art that the inventor had
possession of the claimed subject matter as of the filing date. *Id.*

a)   "an application to be run on a mobile device"

Claim 15 recites "a non-transitory, computer-readable medium comprising software
instructions for developing an application to be run on a mobile device." There is insufficient
written description to support the entire scope of the term "an application to be run on a mobile
device." While the specification uses the term "application," the presence of this generic claim
language in the original disclosure does not satisfy the written description requirement because it
fails to support the scope of the genus claimed. *Ariad Pharm. Inc. v. Eli Lilly & Co.*, 598 F.3d

1336, 1349-50 (Fed. Cir. 2010) ("[A]n adequate written description of a claimed genus requires more than a generic statement of an invention's boundaries.") (citing *Regents of the Univ. of Cal. v. Eli Lilly*, 119 F.3d 1559, 1568 (Fed. Cir. 1997), cert. denied, 523 U.S. 1089 (1998)).

There are myriad ways to write and develop a mobile device application. Some applications, like those described by the '579 specification, but this is only a small subset of the whole world of applications for mobile devices. The claim language "an application for a mobile device" purports to cover this much broader genus including all types mobile device applications, but the specification supports only the narrower category of frame-based applications. For example, the '579 Patent describes the operation of the profiler as follows:

> Profiler 106 monitors playing of frame based application 104 within model 102 to estimate resource usage of application 104 and generates a frame based profile data display 110. Frame based profile data display 110 may allow a user of system 100 to identify areas within application 104 that would exceed resources of mobile device 114.

'579 Patent, 5:39-44.

There is no indication that the inventor of the '579 Patent had possession of a system for developing applications other than frame-based applications. And the written description requirement cannot be satisfied "merely by clearly describing one embodiment of the thing claimed." *LizardTech v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005). The '811 Patent's disclosure of profiling performance of one specific type of application does not provide adequate description for a more generic system for developing all types of applications for mobile devices.

Extrinsic evidence also supports that that the inventor of the '579 Patent did not possess a system for developing all types of applications. In communications regarding a proposed product based off of the subject matter of the '579 Patent, the inventor was questioned:

> "Lastly you focus on frames. Is that the way to think about this
> problem? Increasingly, through things like Flex, Flash development
> will move away from frames since frames are not the right level of
> abstraction for application development. How will MCOM work in
> this case?"

WAPP0010358. Rather than addressing the proposed product's ability to develop applications

other than frame-based applications, the inventor responded that "remov[ing] the layered timelines

and frames and you reduce Flash Lite development to the realms of Java, .NET, and BREW –

coding without a palette (it is similar to giving an artist no canvass to paint on – that is why Flash

has succeeded tremendously on the entertainment side)." *Id.*

Accordingly, the broad genus of "application for a mobile device" was not in the inventor's

possession at the time of invention. Instead, the specification supports only "frame-based

applications." Because the specification does not support the entire scope of the this term, the

claim is invalid for lack of adequate written description. Asserted claims 16-20, 25-29, 33, and 34

all depend from claim 15 and are also invalid for this same deficiency.

b)   "select one or more characteristics associated with a mobile device"

Claim 15 of the '579 Patent recites "select one or more characteristics associated with a

mobile device." The specification of the '579 Patent does not describe the user selecting "one or

more characteristics associated with a mobile device." Instead, the '579 Patent discloses a "user

… select[ing] a mobile device using pull-down list 502 and emulator 101 loads mobile device

characteristics 115 into memory 132." '579 patent, 9:20-22; *see e.g.*, Fig. 13 (step 1310 – "select

mobile device from list of supported mobile devices"); 6:14-16 ("user 15 of system 100 may then

select one or more target mobile devices from a list based upon available characteristics 115");

9:10-12 ("pull-down list 502 allows easy selection of further mobile devices upon which

application 104 is to be profiled"). Selecting a mobile device is not selecting "one or more

characteristics" associated with a mobile device. There is insufficient disclosure to convey to those

skilled in the art that the inventor had possession of the invention claimed in this manner.

Dependent claims 16-20, 25-29, 33, and 34, which depend from claim 1, inherit this

deficiency and likewise fail under the written description requirement.

<table>
<tr><td>c)</td><td>"correspond utilization of a specific displayed resource at a given time with one or more functions, or code, or both of the application responsible for that utilization"</td></tr>
</table>

Claim 15 of the '579 Patent recites "correspond utilization of a specific displayed resource

at a given time with one or more functions, or code, or both of the application responsible for that

utilization." The specification of the '579 Patent contains no description of one or more functions

or code responsible for utilization of a specific displayed resource or any corresponding with such

functions or code. For example, the specification of the '579 Patent mentions displaying "network

utilization as determined by processor module profile," '579 Patent at 21:3-6, and that "[e]ach bar

2014 indicates the total resource utilization for each of certain frames 223 of application 104."

'579 Patent at 21:9-13. But there is no discussion of corresponding the utilization to functions or

code. There is insufficient disclosure to convey to those skilled in the art that the inventor had

possession of the invention claimed in this manner.

Dependent claims 16-20, 25-29, 33, and 34, which depend from claim 1, inherit this

deficiency and likewise fail under the written description requirement.

<table>
<tr><td>d)</td><td>"identifying one or more areas of code, or functions, or both of the application responsible for utilization of a specific displayed resource at a given time"</td></tr>
</table>

Claim 17 of the '579 Patent recites "identifying one or more areas of code, or functions, or

both of the application responsible for utilization of a specific displayed resource at a given time."

The specification of the '579 Patent contains no description of one or more functions or code

responsible for utilization of a specific displayed resource or any identification of such functions

or code. For example, the specification of the '579 Patent mentions that "[f]rame based profile

data display 110 may allow a user of system 100 to identify areas within application 104 that would

exceed resources of mobile device 114." '579 Patent at 4:42-44. But identification by a user of a

graphical display does not disclose software instructions causing a computer to "identify one or

more areas of code, or functions, or both" of the application. There is insufficient disclosure to

convey to those skilled in the art that the inventor had possession of the invention claimed in this

manner.

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e)   **"display a representation of one or more of the monitored
resource"**

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Claim 15 of the '579 Patent recites "display a representation of one or more of the

monitored resource." The specification of the '579 Patent contains no description of display a

representation of one or more of the monitored resource. There is only a single mention of a

"representation" in the specification outside of the claims, without any connection to "display" or

of "monitored resources. The '579 Patent at 20:5-7 ("Device view 1944 is a graphical

representation of application 1906 running within the device model of the mobile device."). There

is insufficient disclosure to convey to those skilled in the art that the inventor had possession of

the invention claimed in this manner. Therefore, claim 15 is invalid because if fails to meet the

written description requirement.

Dependent claims 16-20, 25-29, 33, and 34, which depend from claim 15, inherit this

deficiency and likewise fail under the written description requirement.

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f)   **"two or more representations of the monitored resource"**

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Claim 27 of the '579 Patent recites "two or more representations of the monitored

resource."   The specification of the '579 Patent contains no description of two or more

representations of the monitored resource. There is only a single mention of a "representation" in

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the specification outside of the claims, without any connection to "display" or of "monitored resources. The '579 Patent at 20:5-7 ("Device view 1944 is a graphical representation of application 1906 running within the device model of the mobile device."). There is insufficient disclosure to convey to those skilled in the art that the inventor had possession of the invention claimed in this manner. Therefore, claim 27 is invalid because if fails to meet the written description requirement. Dependent claim 28, which depend from claim 27, inherits this deficiency and likewise fail under the written description requirement.

<p align="center">g)   "scripts can be modified or recorded"</p>

Claim 34 of the '579 Patent recites "scripts can be modified or recorded." The specification of the '579 Patent contains no description of scripts that can be modified or recorded. While the specification mentions "scripts," there is no disclosure that scripts can be modified or recorded. There is insufficient disclosure to convey to those skilled in the art that the inventor had possession of the invention claimed in this manner. Therefore, claim 34 is invalid because if fails to meet the written description requirement.

<p align="center">2.   Lack of Enablement</p>

A patent specification must contain "a written description of the invention . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." *See* 35 U.S.C. §112(1). After reading the specification, one skilled in the art, must be able to "practice the claimed invention without undue experimentation." *AK Steel Corp. v. Sollac*, 344 F.3d. 1234, 1244 (Fed. Cir. 2003). Further, "'It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.' Although the knowledge of one skilled in the art is indeed relevant, the novel aspect of an invention must be enabled in the patent." *Automotive Technologies International, Inc. v. BMW of North America, Inc.* 501 F.3d. 1274, 1283.

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a)   "an application to be run on a mobile device"

As described in Section VI.E.1.a) above, the '579 Patent does not sufficiently describe the

entire scope of applications for a mobile device. This full scope is similarly not enabled by the

specification of the '579 Patent. That section, and the evidence described therein is incorporated

here by reference.

While the specification may enable a POSITA to make a system as claimed for developing

a "frame-based" application, it does not sufficiently teach a POSITA how to make a system for

other types of applications. For example, the '579 Patent describes the claimed "one or more

profile display windows" as follows:

> In one example, operation, Flash Player 154 plays application 104
> within model 102. In particular, player 154 processes frames 223 of
> application 104 based upon ordering of timeline 222. One or more
> profiler modules 202, 204, 206 and 208 within profiler 106 monitor
> resource utilization of each frame, storing results as profiled data
> 152. Profiled data 152 is then displayed as frame based profile data
> 110 on display 140 for review by the user.

'579 Patent, 8:6-13. This explains how a frame-based application may be profiled on a per-frame

basis. The claimed "one or more profile display windows" then displays the results of this profiling

on a per-frame basis.

However, there is no disclosure regarding how the system would work for other types of

applications. It would have required undue experimentation on the part of a POSITA to make a

system as claimed for non-frame-based applications.   As such, the full scope of the claim is not

enabled and the claim is therefore invalid. Asserted claims 16-20, 25-29, 33, and 34 all depend

from claim 15 and are also invalid for this same deficiency

b)   "simulation"

Claim 15 of the '579 Patent recites software instructions that cause a computer to "monitor

utilization of one or more resources of the mobile device over time by an application running on a

simulation of the mobile device," and "initiate transmission of the application on a *simulation* of

the mobile device, or to the physical mobile device, or both." The specification of the '678 Patent

does not disclose any detail that would enable a POSITA to make or use such software instructions

without undue experimentation.   In particular, there is no disclosure or teaching of subject matter

that would permit a POSITA to create a set of computer instructions for such computer testing

interface to simulate a mobile device as claimed.

There is no detail, such as an algorithm or example computer code, provided in

specification of the '579 Patent of how the mobile device is "simulated." The specification lacks

information on how to make the blocks work together to perform the functions as purported. For

example, the specification of the '579 Patent states:

> *In one example of operation, emulator 101 downloads a network
> simulator interface 804 from operator development server 808 into
> device model 102 as shown in FIG. 8. Network simulator interface
> 804 includes functionality that allows device model 102 to
> communicate with simulator 810 to simulate connectivity of mobile
> device 114 with a wireless network.* Specifically, network simulator
> interface 804 within model 102 interacts with data provider 812 and
> event generator 814 to determine resource utilization resulting from
> network interaction by model 102.

'579 Patent, at 11:3-12. The '579 Patent does not provide detail of how the mobile device is

simulated.   The specification lacks detail on how to program device model 102.   The

specification's generic and conclusory statements fail to provide the full, clear, concise, and exact

terms needed to enable a POSITA to make and use the system of claim 15.

Dependent claims 16-20, 25-29, 33, and 34 of the '579 Patent, which depend from claim

15, inherit this deficiency and likewise fail under the enablement requirement.

c)   "simulate"

Claim 19 of the '579 Patent recites software instructions that "simulate one or more

network events that occur when interacting with a wireless network." Claim 20 recites software

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instructions that "simulate events that occur on the mobile device to determine the performance of the application, or the network, or both." Claim 33 recites software instructions that "allow scripts to be created that simulate actions capable of being performed by the mobile device." The specification of the '678 Patent does not disclose any detail that would enable a POSITA to make or use such software instructions without undue experimentation. In particular, there is no disclosure or teaching of subject matter that would permit a POSITA to create a set of computer instructions to simulate network events, events that occur on the mobile device, or actions capable of being performed by the mobile device. There is no detail, such as an algorithm or example computer code, provided in specification of the '579 Patent of how the network events, events that occur on the mobile device, or actions capable of being performed by the mobile device are "simulated." The specification lacks information on how to make the blocks work together to perform the functions as purported. The specification of the '579 Patent states, for example, that "[n]etwork simulator interface 804 includes functionality that allows device model 102 to communicate with simulator 810 to simulate connectivity of mobile device 114 with a wireless network." '579 Patent, at 11:6-9. But the specification lacks detail on how to program device model 102. The specification's generic and conclusory statements fail to provide the full, clear, concise, and exact terms needed to enable a POSITA to make and use the systems of claim 19, 20, and 33.

                                d)   **"select one or more characteristics associated with a mobile device"**

As discussed in Section VI.E.1.b) above, the '579 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '579 Patent, a POSITA would not have been enabled to practice this limitation without undue

experimentation. Thus, claims 15-20, 25-29, 33, and 34 of the '579 Patent fail the enablement requirement.

> e)   **"correspond utilization of a specific displayed resource at a given time with one or more functions, or code, or both of the application responsible for that utilization"**

As discussed in Section VI.E.1.c) above, the '579 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '579 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation. For example "corresponding" two things can be done in a multitude of ways, and the description does not teach how to correspond utilization with one or more functions or code. Thus, claims 15-20, 25-29, 33, and 34 of the '579 Patent fail under the enablement requirement.

> f)   **"identifying one or more areas of code, or functions, or both of the application responsible for utilization of a specific displayed resource at a given time"**

As discussed in Section VI.E.1.c) above, the '579 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. Because this limitation is not described in the written disclosure of the '579 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation. For example, the code or functions likely differ significantly for different applications. The '579 Patent's lack of disclosure would not enable a POSITA to make and use the software instructions as claimed. Thus, claim 17 of the '579 Patent fails the enablement requirement.

          g)   **"display a representation of one or more of the monitored resource"**

Claim 15 of the '579 Patent recites "display a representation of one or more of the monitored resource." The '579 Patent lacks disclosure of this limitation in a manner that would convey to a POSITA that the inventor had possession of the claimed subject matter as of the filing date. There is only a single mention of a "representation" in the specification outside of the claims, without any connection to "display" or of "monitored resources. The '579 Patent at 20:5-7 ("Device view 1944 is a graphical representation of application 1906 running within the device model of the mobile device."). Because this limitation is not described in the written disclosure of the '579 Patent, a POSITA would not have been enabled to practice this limitation without undue experimentation.

Dependent claims 16-20, 25-29, 33, and 34, which depend from claim 15, inherit this deficiency and likewise fail the enablement requirement.

          3.   **Indefiniteness**

35 U.S.C. §112, paragraph 2, requires that "[T]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. *See* 35 U.S.C. §112(2). The Supreme Court recently held that "[a]patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus Inc. v. Biosig Instruments Inc.*, 134 S. Ct. 2120, 2124 (2014).

          a)   **"network characteristics"**

Claims 25 and 26 of the '579 Patent recite "network characteristics." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton Energy Servs.,*

Inc. v. M-I LLC, 514 F.3d 1244, 1249 (Fed. Cir. 2008). Claims 25 and 26 depend from claim 18, which recites that "the characteristics include bandwidth information." Claim 18 does not recite "network characteristics." Instead, Claim 18 recites "characteristics" in plural form, one of which is "bandwidth information." Claims 25 and 26 fail to convey with sufficient specificity which of the characteristics referred to in Claim 18 would satisfy the recited "network characteristics" limitation. There is insufficient disclosure to convey to those skilled in the art that the inventor had possession of the invention claimed in this manner.

b)   "characteristics"

Claim 15 of the '579 Patent recites "characteristics." "[A] patent's claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). Interval Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1370 (Fed. Cir. 2014). "[T]here is an indefiniteness problem if the claim language might mean several different things and no informed and confident choice is available among the contending definitions." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014). The specification and prosecution history of the '579 patent fails to define or describe "characteristic" in a manner that would inform a POSITA about the scope of claim 15 with reasonable certainty. For example, the '579 patent does not specify what combinations of "characteristics" can be selected, how many characteristics can be selected, whether all of a mobile device's "characteristics" must be selected, or what "all" characteristics of a mobile device means. There are infinite possibilities for combinations of "characteristics" that could be selected based on the specification, which does not inform a skilled artisan of the scope of the invention with reasonable certainty.

Dependent claims 16-20, 25-29, 33, and 34, which depend from claim 1, inherit this deficiency and likewise fail under the written description requirement. The claims that depend

from claim 15 do not further limit "characteristics" in any way. Thus, the dependent claims do not spare term "characteristics" from indefiniteness. For example, Claim 18 states that "characteristics include bandwidth information." The word "include" does not limit "characteristics" in any way. Claim 21 states that characteristics are "derived at least in part from information captured from one or more wireless networks." Stating that characteristics are derived "at least in part" from information captured from a wireless network, does not limit the breadth of potential "characteristics" in any way. Claim 23 states that "characteristics" are "based on a geographical region." This limitation also does not limit the breadth of potential different characteristics of a mobile device, but simply states that the characteristics must be "based on" a geographical region.

c)   "the monitored resource"

Claim 15 of the '579 Patent recites "the monitored resource" without reciting "a monitored resource." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). This court found a claim indefinite where there was lack of antecedent basis for the term in an independent claim. *Wapp Tech Ltd. P'ship v. Seattle Spinco, Inc.*, No. 4:18-CV-469, 2020 WL 1983087, at *24 (E.D. Tex. Apr. 27, 2020) (finding the claim indefinite where the term "the test" did not have an antecedent basis in an independent claim).

Claim 15 is an independent claim, and therefore there is no other claim which may provide an antecedent basis for "the monitored resource" in claim 15. Therefore, the recital of "the monitored resource" in Claim 15 of the '579 Patent lacks explicit antecedent basis. *Wapp Tech*, 2020 WL 1983087 at *24. Furthermore, recitation of "monitor utilization of one or more resources" in Claim 15 does not provide an alternative antecedent basis for "the monitored resource." This is at least for the following two reasons. First, the phrase "monitor utilization of

one or more resources" does not specify which of these "one or more resources" is a "monitored resource." Second, the phrase "monitor utilization of one or more resources" recites monitoring of utilization, not monitoring of resources. Therefore, in the absence of the explicit antecedent basis for the monitored resource in Claim 15, "such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton*, 514 F.3d at 1249. "This lack of antecedent basis renders [this claim] indefinite." *Wapp Tech*, 2020 WL 1983087 at *24.

Dependent Claims 16-20, 25-29, 33, and 34 of the '579 Patent, which depend from claim 15, inherit this deficiency and likewise fail under the definiteness requirement.

d) "display a representation of one or more of the monitored resource"

Claim 15 of the '579 Patent recites "display a representation of one or more of the monitored resource." This claim is indefinite, at least because a POSITA would not have been able to translate this phrase into a meaningfully precise claim scope. *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) ("Even if a claim term's definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope.").

The claim does not recite "*the* one or more of the monitored resource." Therefore, "one or more of the monitored resource" is a newly introduced claim term, not defined elsewhere in the claim. Furthermore, the specification of the '579 Patent does not provide any guidance or an explanation of the meaning of the phrase "display a representation of one or more of the monitored resource." Therefore, Claim 15 is indefinite.

Dependent Claims 16-20, 25-29, 33, and 34 of the '579 Patent, which depend from claim 15, inherit this deficiency and likewise fail under the definiteness requirement.

e)   "the physical mobile device"

Claim 15 of the '579 Patent recites "the physical mobile device" without reciting "a physical mobile device." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). This court found a claim indefinite where there was lack of antecedent basis for the term in an independent claim. *Wapp Tech Ltd. P 'ship v. Seattle Spinco, Inc.*, No. 4:18-CV-469, 2020 WL 1983087, at *24 (E.D. Tex. Apr. 27, 2020) (finding the claim indefinite where the term "the test" did not have an antecedent basis in an independent claim).

Claim 15 is an independent claim, and therefore there is no other claim which may provide an antecedent basis for "the physical mobile device" in claim 15. Therefore, the recital of "the physical mobile device" in Claim 15 of the '579 Patent lacks explicit antecedent basis. *Wapp Tech*, 2020 WL 1983087 at *24. Furthermore, recitation of "a mobile device" in Claim 15 does not provide an alternative antecedent basis for "the physical mobile device." This is at least because the claim distinguished between a mobile device and a physical mobile device by reciting "initiate transmission of the application on a simulation of the mobile device, or to the physical mobile device, or both." Therefore, in the absence of the explicit antecedent basis for the monitored resource in Claim 15, "such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton*, 514 F.3d at 1249. "This lack of antecedent basis renders [this claim] indefinite." *Wapp Tech*, 2020 WL 1983087 at *24.

Dependent Claims 16-20, 25-29, 33, and 34 of the '579 Patent, which depend from claim 15, inherit this deficiency and likewise fail under the definiteness requirement.

> **f)**   **"the physical mobile device is connected to at least one of the internet, a wireless network and the remote server, to enable a user to interact with and test the application"**

Claim 16 of the '579 Patent recites "the physical mobile device is connected to at least one of the internet, a wireless network and the remote server, to enable a user to interact with and test the application." This claim is indefinite, at least because a POSITA would not have been able to translate this phrase into a meaningfully precise claim scope. *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) ("Even if a claim term's definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope.").

Claim 16 depends from Claim 15, which is directed to a non-transitory, computer-readable medium comprising software instructions. Limitation "the physical mobile device is connected to at least one of the internet, a wireless network and the remote server " purports to limit a state of "the physical mobile device," which is not part of the computer-readable medium. A POSITA would not have understood the scope of Claim 16 where a structural limitation related to the physical mobile device is added to a claim directed to a computer-readable medium. Therefore, Claim 16 is indefinite.

> **g)**   **"one or more areas of code, or functions, or both of the application responsible for utilization"**

Claim 17 of the '579 Patent recites "one or more areas of code, or functions, or both of the application responsible for utilization." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008).

Claim 17 recites "one or more areas of code, or functions, or both of the application responsible for utilization" without a reference to any antecedent basis. In other words, Claim 17 does not recite "the one or more areas of code, or functions, or both of the application responsible for utilization" or "said one or more areas of code, or functions, or both of the application responsible for utilization." However, Claim 17 depends on Claim 15, and Claim 15 already recites "one or more functions, or code, or both of the application responsible for utilization."

A POSITA would not have understood whether "one or more areas of code, or functions, or both of the application responsible for utilization" of Claim 17 is the same element, or a different element from "one or more functions, or code, or both of the application responsible for utilization" of Claim 15. If it is the same element, it needed to be recited with "the" in Claim 17. If it is a different element, a POSITA would not have understood the difference between these element, because the specification does not explain the differences between "areas of code, or functions" of Claim 17 and "functions, or code" of Claim 15.

Claim 17 does not have a proper antecedent basis for "one or more areas of code, or functions, or both of the application responsible for utilization." Such basis is not otherwise present by implication and the meaning of Claim 17 is not reasonably ascertainable. Therefore, Claim 17 is invalid as indefinite.

h)   "a specific displayed resource at a given time"

Claim 17 of the '579 Patent recites "a specific displayed resource at a given time." A claim may be indefinite "if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008).

Claim 17 recites "a specific displayed resource at a given time" without a reference to any antecedent basis. In other words, Claim 17 does not recite "the specific displayed resource at a

given time" or "said specific displayed resource at a given time." However, Claim 17 depends on Claim 15, and Claim 15 already recites "a specific displayed resource at a given time."

A POSITA would not have understood whether "a specific displayed resource at a given time" of Claim 17 is the same element, or a different element from "a specific displayed resource at a given time" of Claim 15. If it is the same element, it needed to be recited with "the" in Claim 17. If it is a different element, a POSITA would not have understood the difference between these identically recited elements of Claims 15 and 17.

Claim 17 does not have a proper antecedent basis for "a specific displayed resource at a given time." Such basis is not otherwise present by implication and the meaning of Claim 17 is not reasonably ascertainable. Therefore, Claim 17 is invalid as indefinite.

4.   Patent Ineligible Subject Matter

Section V above sets forth reasons why all of the Asserted Claims of all Asserted Patents, including claims 15-20, 25-29, 33, and 34 of the '579 Patent are patent ineligible under 35 U.S.C. § 101 for being directed to an abstract idea under step one of *Alice*. Section V further explains that the claim elements do not transfer any of the claims into patent-eligible subject matter. Section V is incorporated by reference here.

VII.   ACCOMPANYING DOCUMENT PRODUCTION

Pursuant to P.R. 3-4(a), JPMC has produced source code, specifications, schematics, flow charts, artwork, formulas, or other documentation sufficient to show the operation of any aspects or elements of an Accused Instrumentality identified by Plaintiffs in their P.R. 3-1(c) chart.

Pursuant to P.R. 3-4(b), JPMC is producing prior art references and corroborating evidence concerning prior art that do not appear in the file history of the Asserted Patents, in Bates-labeled documents JPMC-00152259-JPMC-00166325. These prior art references are cited in Exhibits A1-A18, B1-B18, C1-C18, D1-D18, and E1-E18, as well as in the State of the Art section above.

Various prior art references cited in JPMC's invalidity contentions and attached Exhibits were previously produced in this litigation by third parties, in the following Bates ranges, and JPMC reserves the right to rely on such prior art as it continues its ongoing investigation.

- Ericsson: Eric 001- Eric 564
- Blackberry: BB_JPM_WAPP000001 - BB_JPM_WAPP000464; BB_WAPPvWF00000001--BB_WAPPvWF00006535; 07.01.2022 Document Production_BB_WAPPvWF_located_bundles.zip
- Microfocus: MF0000001-MF0024190
- Abobe: Awaiting Production
- Borland: Awaiting Production
- T-Mobile: TMO-000001- TMO-000851
- IBM: IBM 000001-IBM 003912
- Oracle: ORA_WAPP_000001 – ORA_WAPP_001307
- Qualcomm: QCWAPPVJPMORGAN001137_0000001-QCWAPPVJPMORGAN001137_0005134

JPMC's search for prior art references, additional documentation, and/or corroborating evidence concerning prior art systems is ongoing. Accordingly, JPMC reserves the right to continue to supplement its production as additional prior art references, additional documentation, and/or corroborating evidence concerning prior art documents/systems are obtained during the course of discovery. JPMC specifically reserves the right to modify, amend, or supplement these disclosures in accordance with the Court's Rules as additional information becomes available through discovery and its investigation.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on June 21, 2024, a true and correct copy of the foregoing document was served on all counsel of record via email.

/s/Rita J. Yoon
Rita J. Yoon